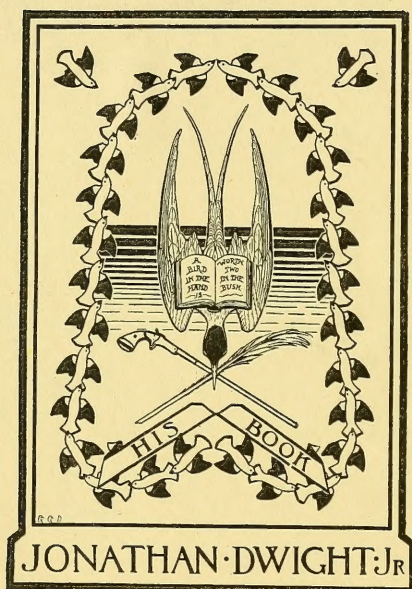
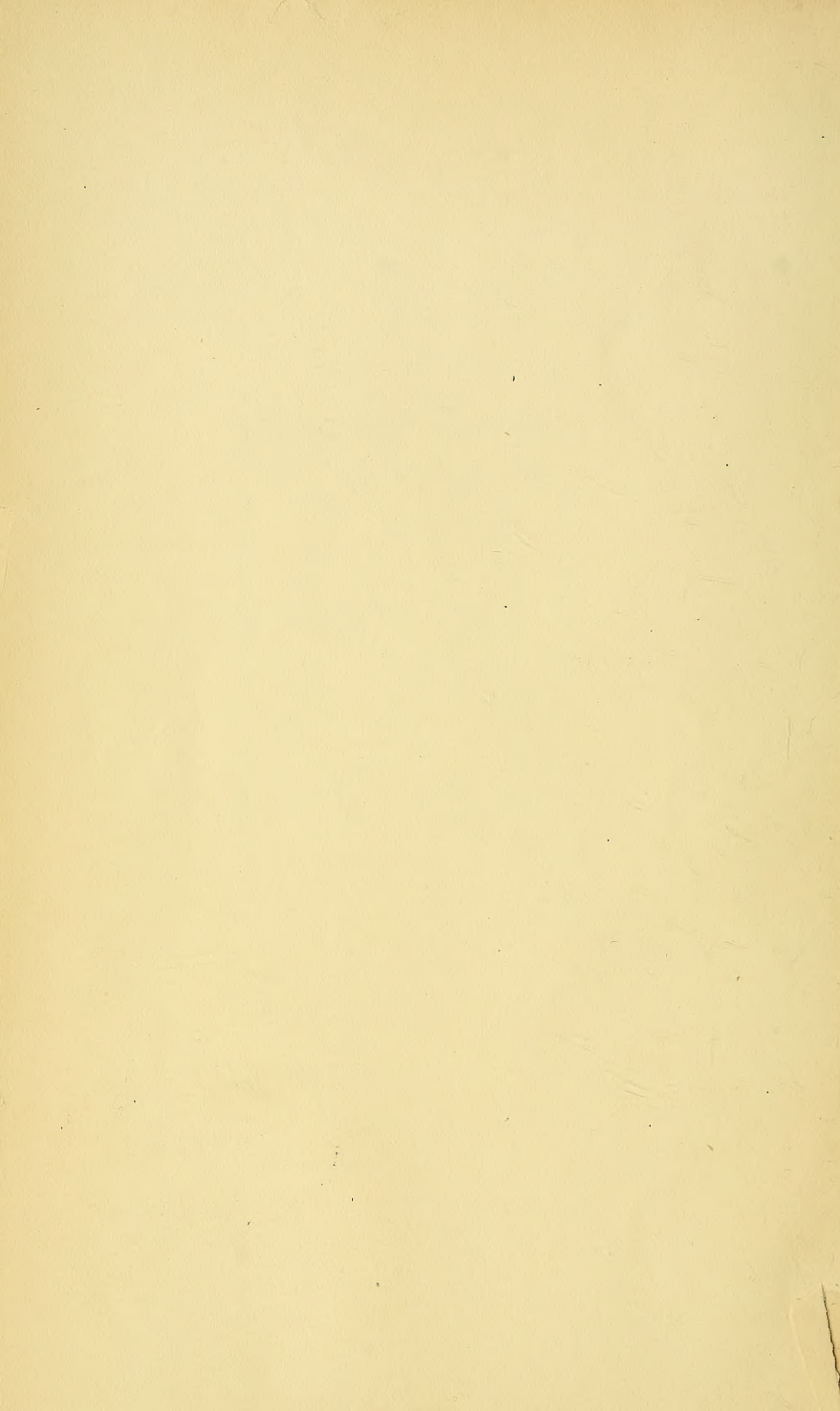


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OF THE

NUTTALL ORNITHOLOGICAL CLUB:

A Quarterly Journal of Ornithology.

VOLUME VIII.

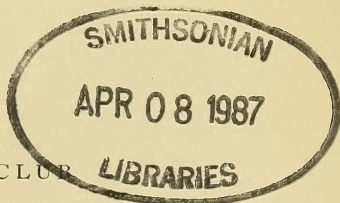
Editor,

J. A. ALLEN.

Associate Editors,

S. F. BAIRD AND ELLIOTT COUES.

CAMBRIDGE, MASS.:
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CONTENTS OF VOLUME VIII.

NUMBER I.

	PAGE.
THE COMPLIMENTS OF THE SEASON. By <i>Dr. Coues</i>	1
NEW BRUNSWICK NOTES. By <i>M. Chamberlain</i>	6
BICKNELL'S THRUSH (<i>Turdus aliciae bicknelli</i>) IN NEW ENGLAND. By <i>William Brewster</i>	12
NOTES ON AN HERMAPHRODITE BIRD. By <i>J. Amory Jeffries</i>	17
ON A COLLECTION OF BIRDS LATELY MADE BY MR. F. STEPHENS IN ARIZONA. By <i>William Brewster</i>	21
MEMORANDA OF A COLLECTION OF EGGS FROM GEORGIA. By <i>H.</i> <i>B. Bailey</i>	37
NOTES ON THE BREEDING HABITS OF MAXIMILIAN'S JAY (<i>Gymno-</i> <i>citta cyanocephala</i>) AND CLARKE'S CROW (<i>Picicorvus columbia-</i> <i>nus</i>). By <i>B. F. Goss</i>	43
IMMATURITY VS. INDIVIDUAL VARIATION. By <i>Nathan Clifford Brown</i>	46
NEST AND EGGS OF LECONTE'S THRASHER (<i>Harporhynchus redivi-</i> <i>vus lecontei</i>). By <i>G. Holterhoff, Jr.</i>	48

RECENT LITERATURE.

The Transactions of the Linnæan Society, 50; Saunders's Notes on some Laridæ from Peru and Chili, 54; Hoffman's List of Birds observed at Fort Berthold, D. T., 54; Canadian Birds, 55; Cory's Beautiful and Curious Birds, 55; A Checking List of North American Birds, 56; Shufeldt's Contributions to the Anatomy of Birds, 56.

GENERAL NOTES.

Bendire's Thrasher (*Harporhynchus bendirii*) in Colorado, 57; The Water Thrush in Confinement, 57; An interesting flight of Pine Finches, 57; On Leconte's Bunting (*Coturniculus lecontei*) and other Birds observed in South-eastern Illinois, 58; Note on "Paserculus caboti," 58; The Cardinal Grosbeak in Massachusetts, 59; Crows Fishing, 59; The Scissor-tail (*Milvulus forficatus*) at Norfolk, Virginia, 59; The Calliope Hummingbird and Pygmy Owl in Montana, 59; On some remarkable points of relationship between the American Kingfishers, 59; Richardson's Owl in Southern New Hampshire, 61; The Burrowing Owl in Florida, 61; Note on the Mississippi Kite, 61; Occurrence of the Swallow-tailed Kite in Massachusetts, 61; The Baldpate in Rhode Island, 61; Geographical variation in size among certain Anatidæ and Gruidæ, 62; Caspian Tern in Ohio, 62; Polygamy among Oscines, 63; The Prescient Power in Birds, 63; Migration of Birds in the Mississippi Valley, 64.

NUMBER II.

	PAGE.
THE VERNAL MIGRATION OF WARBLERS ON WOLF RIVER, ONTARIO MIC COUNTY, WISCONSIN. By <i>F. L. Gruntvig</i>	65
THE COMMON NAMES OF AMERICAN BIRDS. By <i>Ernest Ingersoll</i>	72
DESCRIPTION OF A HYBRID SPARROW (<i>Zonotrichia albicollis</i> + <i>Junco hiemalis</i>). By <i>Charles H. Townsend</i>	78
NOTE ON EXCEPTIONS TO THE LAW OF INCREASE IN SIZE NORTHWARD AMONG NORTH AMERICAN BIRDS. By <i>J. A. Allen</i>	80
BIRDS OF THE LOWER URUGUAY. By <i>Walter B. Barrows</i>	82
DESCRIPTIONS OF NEW SPECIES OF BIRDS FROM SANTO DOMINGO. By <i>Charles B. Cory</i>	94
HOLBÖLL'S RED-POLL (<i>Egiothus linaria holboelli</i>) IN NEW ENG- LAND. By <i>William Brewster</i>	95

RECENT LITERATURE.

The British Museum Catalogue of Birds, 99; Birds and Insects, 105; Economic Relations of Birds again, 107; Report on the Birds of Ohio, 110; Illustrations of the Nests and Eggs of the Birds of Ohio, 112; Brown's Birds of Portland, 112; Ridgway on the Tree-creepers, 113; Ridgway's Review of the Genus *Centurus*, 114; Lawrence on New Species of Birds, 114; Freke on North American Birds crossing the Atlantic, 114; Freke on European Birds observed in North America, 115; Canadian Birds—Errata, 115; Minor Ornithological Publications, 116.

GENERAL NOTES.

Probable breeding of the Winter Wren (*Anorthura troglodytes hiemalis*) in Eastern Massachusetts, 119; The Winter Wren (*Anorthura troglodytes hiemalis*) in Western Vermont, 120; *Troglodytes aedon parkmani* in Kansas, 120; Capture of the Great Carolina Wren (*Thryothorus ludovicianus*) in Connecticut, in March, 120; A second instance of the Wintering of the Pine Warbler in Massachusetts, 120; Development of a brood of Black-and-yellow Warblers (*Dendroica maculosa*), 121; Capture of *Egiothus linaria holboelli* in the Lower Hudson Valley, 121; Individual Variation in Color in the European Crossbill, 121; The Cow Bunting wintering in Massachusetts, 121; An unusual Influx of the Three-toed Woodpeckers (*Picoides arcticus* and *P. americanus*) into Eastern Massachusetts, 122; The Barn Owl in Canada West, 122; Capture of Richardson's Owl (*Nyctala tengmalmi richardsoni*) near Providence, R. I., 122; Capture of the Great Gray Owl in Massachusetts, 123; Recent occurrence of the Flammulated Owl in Colorado, 123; Capture of the Golden Eagle at Albany, N. Y., 123; Wintering of the Sora Rail at the North, 124; Nesting Habits of the Canada Goose (*Bernicla canadensis*), 124; *Larus glaucescens* in the Bay of Fundy, 125; Occurrence of *Larus glaucescens* at Grand Menan, N. B., 125; The White-winged Gull in Maine, 125; The Roseate Tern on the Coast of Maine, 126; Winter Birds in New Brunswick, 126; Some Albinos in the Museum of the Philadelphia Academy, 126; A Letter from an Old-time Ornithologist, 127; Eggs of British Birds in Exchange for Eggs of American Birds, 128.

NUMBER III.

	PAGE
BIRDS OF THE LOWER URUGUAY. By <i>Walter B. Barrows</i> . . .	128
BIRD NOTES FROM WESTERN ONTARIO. By <i>T. McIlwraith</i> . . .	143
NOTES ON SOME OF THE WINTER BIRDS OF MASSACHUSETTS. By <i>Herbert K. Job</i> . . .	147
LIST OF BIRDS OBSERVED IN THE VICINITY OF COLORADO SPRINGS, COLORADO, DURING MARCH, APRIL, AND MAY, 1882. By <i>J. A. Allen</i> and <i>William Brewster</i> . . .	151

RECENT LITERATURE.

Sterns and Coues's "New England Bird Life," 161; Everett Smith's Catalogue of Maine Birds, 164; Contributions to the Anatomy of Birds, 168; Ridgway on New Species and Sub-species of Birds, 168; Reichenow and Shalow's Compendium of newly discovered Genera and Species of Birds, 169; Reichenow's *Conspectus Psittacorum*, 169; Stejneger on two new Races of *Myiadestes obscurus*, 170; Stejneger's Synopsis of the West India Species of *Myiadestes*, 170; National Museum Desiderata of American Birds, 170; Dubois on Geographical Variation in the Crossbills, 170; Birds of Pennsylvania, 171; Minor Ornithological Publications, 171.

GENERAL NOTES.

Capture of the Blue-gray Gnatcatcher (*Poliophtila cerulea*) in Connecticut, 179; Parkman's Wren in Illinois, 179; Breeding of the Short-billed Marsh Wren (*Cistothorus stellaris*) in the Hudson Highlands, 179; Early Capture of the Orange-crowned Warbler, 179; Occurrence of *Siurus naevius* in Greenland, 179; Capture of the Yellow-breasted Chat at Albany, N. Y., 180; Nest of *Chrysomitris pinus* at Sing Sing, N. Y., 180; Susceptibility of a Bird to color, 181; The Lark Finch again in Massachusetts, 181; The Meadow Lark (*Sturnella magna*) in Vermont in Winter, 182; *Geococcyx* as a Vocalist, 182; A partial Albino Short-eared Owl (*Asio accipitrinus*), 183; Great Gray Owl in Rhode Island, 183; Occurrence of a third Massachusetts specimen of the Labrador Gyrfalcon (*Falco gyrfalco obsoletus*), 184; Instance of Semi-domestication of California Quail, 184; The Wood Ibis in Massachusetts, 185; The Scarlet Ibis in Florida, 185; Rails and Snipe in Ohio in Winter, 186; Breeding of the Mallard in New England, 186; The Glaucous Gull (*Larus glaucus*) at Portland, Me., 186; The Common Cormorant on the coast of South Carolina, 186; Occurrence of the Northern Phalarope and Audubon's Warbler, and Nesting of the Mocking Bird in Western Kansas, 186; A California Bird-Wave, 188.

NUMBER IV.

	PAGE.
LIST OF BIRDS OBSERVED IN THE VICINITY OF COLORADO SPRINGS, COLORADO, DURING MARCH, APRIL, AND MAY, 1882. By <i>F. A.</i> <i>Allen and William Brewster</i>	189
BIRDS OF THE LOWER URUGUAY. By <i>Walter B. Barrows</i> , ...	198
ON A BIRD NEW TO NORTHERN NORTH AMERICA. By <i>C. Hart</i> <i>Merriam, M. D.</i>	213
ON AN APPARENTLY NEW GULL FROM EASTERN NORTH AMERICA. By <i>William Brewster</i>	214
BREEDING OF THE HARLEQUIN DUCK (<i>Histrionicus minutus</i>). By <i>C. Hart Merriam, M. D.</i>	220
THE AMERICAN ORNITHOLOGIST'S UNION	221

RECENT LITERATURE.

Goss's Birds of Kansas, 227; Beckham's Birds of Nelson County, Kentucky, 227; Nutting and Ridgway on Costa Rican Birds, 228; Migration of Birds, 228; Bean's Notes on Birds collected in Alaska and Siberia, 231; Old World Birds in the National Museum, 231; Stejneger on the Cygninae, 231; Turner on *Lagopus mutus* and its Varieties, 232; Reichenow's "Die Vögel der zoologischen Gärten," 232; Reichenow's "Die Entenvögel der zoologischen Gärten," 232; Linden on Domestication of Wild Ducks, 233; Minor Ornithological Publications, 233.

GENERAL NOTES.

The Willow Thrush and Holböhl's Linnet in Illinois, 239; Nest and Eggs of *Myiadestes townsendi*, 239; The Mocking Bird in Western Kansas and the Northern Phalarope in Southern Wyoming, 240; Nest and Eggs of *Parus montanus*, 240; The Gray-crowned Finch in Confinement, 240; Description of the Nest and Young of the Pygmy Owl (*Glaucidium gnoma*), 242; The Bald Eagle fishing, 242; A Flock of White Herons (*Herodias egretta*) in Eastern Massachusetts, 242; *Herodias egretta* at Amherst, 243; Wilson's Snipe (*Gallinago wilsoni*) nesting in Massachusetts, 243; Baird's Sandpiper at Scarborough, Maine, 243; Cory's Shearwater (*Puffinus borealis*) off the Coast of Massachusetts, 244; Addendum to List of Birds ascertained to occur within ten miles from Pont de Monts, Province of Quebec, Canada; based chiefly upon the Notes of Napoleon A. Comeau, 244; The Movements of Certain Winter Birds, 245; The Ridgway Ornithological Club of Chicago, 246.

INDEX	247
-----------------	-----

BULLETIN

OF THE

NUTTALL ORNITHOLOGICAL CLUB:

A Quarterly Journal of Ornithology.

Vol. VIII. — JANUARY, 1883. — No. 1.

CONTENTS.

	PAGE.	
THE COMPLIMENTS OF THE SEASON. By <i>Dr. Coues</i>	1	Canadian Birds, 55; Cory's Beautiful and Curious Birds, 55; A Checking List of North American Birds, 56; Shufeldt's Contributions to the Anatomy of Birds, 56.
NEW BRUNSWICK NOTES. By <i>M. Chamberlain</i>	6	
BICKNELL'S THRUSH (<i>Turdus alicia bicknelli</i>) IN NEW ENGLAND. By <i>William Brewster</i>	12	GENERAL NOTES.—Bendire's Thrasher (<i>Harporhynchus bendirii</i>) in Colorado, 57; The Water Thrush in Confinement, 57; An interesting flight of Pine Finches, 57; On Leconte's Bunting (<i>Coturniculus lecontei</i>) and other Birds observed in South-eastern Illinois, 58; Note on "Passerculus caboti," 58; The Cardinal Grosbeak in Massachusetts, 59; Crows Fishing, 59; The Scissor-tail (<i>Milvulus forficatus</i>) at Norfolk, Virginia, 59; The Calliope Hummingbird and Pigmy Owl in Montana, 59; On some remarkable points of relationship between the American Kingfishers, 59; Richardson's Owl in Southern New Hampshire, 61; The Burrowing Owl in Florida, 61; Note on the Mississippi Kite, 61; Occurrence of the Swallow-tailed Kite in Massachusetts, 61; The Baldpate in Rhode Island, 61; Geographical variation in size among certain Anatidæ and Gruidæ, 62; Caspian Tern in Ohio, 62; Polygamy among Oscines, 63; The Prescient Power in Birds, 63; Migration of Birds in the Mississippi Valley, 64.
NOTES ON AN HERMAPHRODITE BIRD. By <i>J. Amory Jeffries</i>	17	
ON A COLLECTION OF BIRDS LATELY MADE BY MR. F. STEPHENS IN ARIZONA. By <i>William Brewster</i>	21	
MEMORANDA OF A COLLECTION OF EGGS FROM GEORGIA. By <i>H. B. Bailey</i>	37	
NOTES ON THE BREEDING HABITS OF MAXIMILIAN'S JAY (<i>Gymnocitta cyanocephala</i>) AND CLARKE'S CROW (<i>Picicorvus columbianus</i>). By <i>B. F. Goss</i>	43	
IMMATURITY VS. INDIVIDUAL VARIATION. By <i>Nathan Clifford Brown</i>	46	
NEST AND EGGS OF LECONTE'S THRASHER (<i>Harporhynchus redivivus lecontei</i>). By <i>G. Hotterhoff, Jr.</i>	48	
RECENT LITERATURE.—The Transactions of the Linnean Society, 50; Saunders's Notes on some Laridæ from Peru and Chili, 54; Hoffman's List of Birds observed at Fort Berthold, D. T., 54;		

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A QUARTERLY JOURNAL OF ORNITHOLOGY.

SEVENTH YEAR OF PUBLICATION.

This BULLETIN is devoted to

GENERAL ORNITHOLOGY.

All the leading ornithologists of this country, and nearly all others who are actively interested in the progress of the science, are regular contributors to its pages.

Though intended primarily as the medium of communication between working ornithologists, and consequently maintaining a high technical character, it aims to be entertaining as well as instructive, and contains a fair proportion of sufficiently popular matter to suit all those who are interested in Birds. It will be mainly devoted, as heretofore, to the Ornithology of North America. Being a general

MAGAZINE OF ORNITHOLOGY,

its review department promptly gives critical notices, not only of American works and papers, but of the more important publications relating to Ornithology at large; while its department of General Notes is rich in the experiences of the working ornithologists of this country.

As heretofore, the Editorial Supervision is in charge of

MR. J. A. ALLEN,

Assisted by PROF. S. F. BAIRD *and* DR. ELLIOTT COUES.

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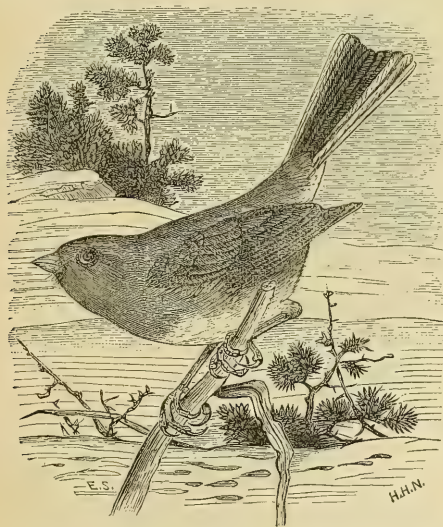
JANUARY, 1883.

No. I.

THE COMPLIMENTS OF THE SEASON.

BY DR. COUES.

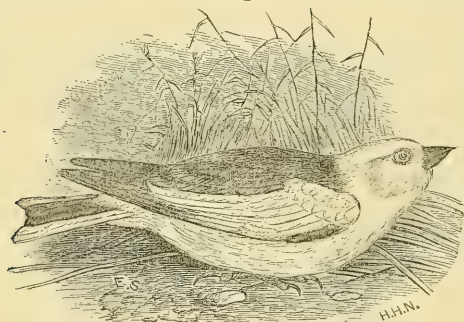
Since we sent out the last number of the Bulletin, a great many of our feathered friends have called upon us to pass the compliments of the season, congratulating us upon the close of the seventh volume of their chronicles, and encouraging us to hope for their distinguished patronage of the eighth fascicle of their *Fasti*. On looking over our autograph album we find a number of cards left by our New Year's callers, so prettily engraved that we are sure our readers will be pleased to look over some of the lot.*



One of the earliest was *J. hiemalis*, who said he had spent the summer very pleasantly with his family on the boundary line between the Canadian and Alleghanian Faunæ which was run in 1871 by Mr. Allen, after some earlier preliminary surveys by Prof. Verrill. He was to pass the winter in Washington, where he desired the BULLETIN to be sent to him, addressed to the care of the Smithsonian Institution, as he

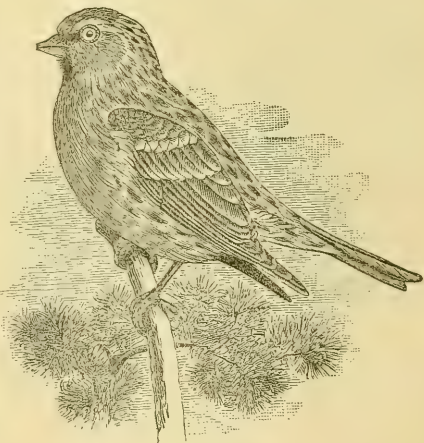
* Ad viv. del. Edwin Sheppard, Philadelphia; xylogr. H. H. Nichols, Washington-op.: permissu superiorum, Estes et Lauriat, Boston.

expected to call upon Mr. Ridgway and Mr. Henshaw, in the South Tower, and hoped to find them both well.

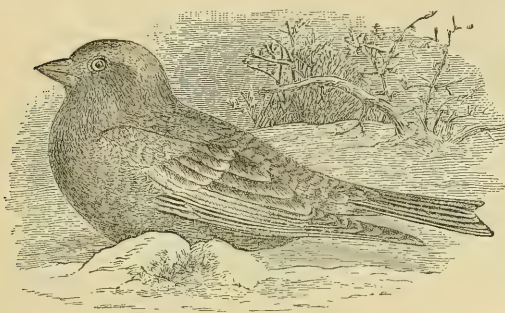


P. nivalis and his cousin *P. lapponicus* apologized for appearing in unseasonable costume, explaining that they had left in such a hurry, owing to an unexpected change in the weather, that they had really not had time to change their dress. They left pleasant words for Mr. Brewster, in recognition of his papers on the Birds of Arizona, and wished us to thank Mr. Purdie for his kind assistance in finishing the second volume of "New England Bird-Life." They expected to be about all winter and would see us again later.

A rosy little fellow, *Æ. linaria*, was kind enough to assure us personally that he had forgotten all about the trouble we made in his family in 1860, when we visited him in Labrador, and afterward spoke so shabbily of his appearance. His brother *exilipes*, he added, had settled in Siberia, where at last accounts he was doing as well as could be expected,

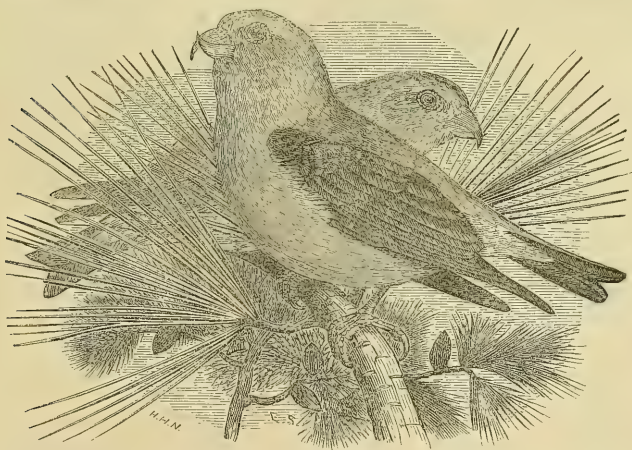


though the family affairs were still somewhat involved,—too many lawyers, since the death of *fuscescens* and *rostratus*, and the extension of the *canescens* estate beyond Greenland. He begged to hand us the card of a western relative, *Leucosticte tephrocotis*,



to be forwarded to Mr. J. M. Wade of Norwich, Connecticut, with best wishes for the success of the "Ornithologist and Oölogist," which he thought much improved in health and spirits of late.

Loxia curvirostra called with his better half, a compliment which we appreciated highly. In spite of the slight impediment in their speech we understood that they wished to call our attention to the increasing number of ornithological articles contained



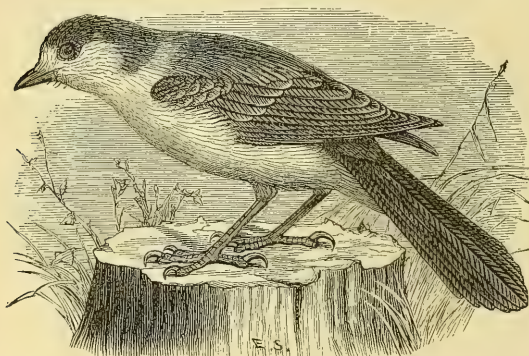
in the Bulletins of the United States National Museum, as showing that Professor Baird's first love still touched his own heart, as it did the hearts of his unnumbered friends and disciples. They expected to go to house-keeping early in March.



P. enucleator spoke of his recent visit to "Forest and Stream," where he was so pleasantly received, and where he found ornithological matters so ably conducted by his friend Mr. George Bird Grinnell.

One of our visitors did not, we regret to say, make himself entirely agreeable. *Perisoreus* was inclined to be cynical, and entirely too inquisitive, besides professing to know too much. He

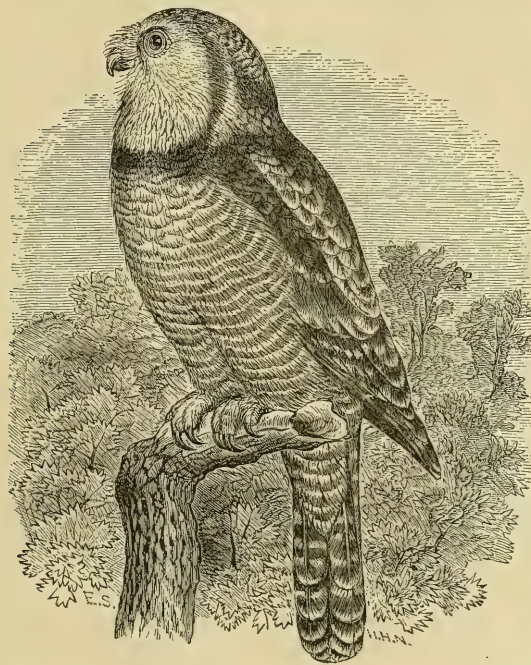
wanted to inquire when the Water Bird volumes of the Baird, Brewer and Ridgway "History of North American Birds" would be out, and whether the second volume of the "Birds of the Colorado Valley" would ever appear. We told him plainly that was



nullum sui negotii. He wondered why Professor Cope did not pay more attention to birds in the "American Naturalist." He wanted to know what had become of Mr. T. G. Gentry; and whether Dr. C. H.

Merriam was likely to do the Birds of the Adirondacks as handsomely as he executed the Mammals; and whether Mr. Frank R. Rathbun's "Birds of Beauty" were likely to be a joy forever; and whether Mr. C. B. Cory's Birds were more or less beautiful than usual. He asked us if we knew (fancy a miserable Whiskey-jack asking editors "if they knew"!) that Studer's Jasper's "Birds of America" was having a good run; that the official reports of Mr. E. W. Nelson and Mr. L. M. Turner were to be illustrated with colored quarto plates by Mr. Ridgway; that the Rev. J. H.

Langille of Buffalo had completed a work upon New York Birds; and that the new "Avifauna Columbiana," to be published with illustrations under the auspices of the Biological Society of Washington, had gone to press. This was cool, considering that Dr. D. W. Prentiss and ourselves were the authors of the work, as we informed him, and accepted his apology. In fact the only graceful things the saucy gossip had to say were respecting the "Nests and Eggs of the Birds of Ohio," which work he hoped would meet with all the success it so well deserved.



Our little visitors seemed in some hurry to be off when our next caller was announced. *Surnia* was polite and dignified, as usual. He had heard, he said, that we were about to publish a new edition of the "Key," which he trusted would be much more handsomely illustrated than the former one, and, as his own contribution to that end, offered us a striking likeness of himself. He re-

marked with grim humor that as the plan of the work included a treatise on the anatomy of birds, he was at our service for any dissections we might wish made. But this being rather a delicate subject, the conversation turned upon late catalogues and nomenclators of North American Birds. *Surnia* complained with some warmth, that, like the old woman in Mother Goose, he hardly knew whether he was himself or somebody else. He begged to suggest the propriety of calling a Congress of American Ornithologists to discuss, vote upon, and decide each case in which

the doctors disagreed, the proceedings to be published in the NUTTALL BULLETIN and the congressmen to bind themselves to abide by the decision of the majority. The plan seemed to him perfectly feasible, and probably the only way to secure the greatly desired uniformity of nomenclature. Not forgetting to inquire politely respecting our "Ornithological Bibliography," the progress of which, he understood, had been arrested by the War Department at Washington, and begging to be remembered to all absent Nuttallians, *Surnia* bowed gravely and withdrew.

Among all our callers there was not one who did not ask particularly after our beloved and respected Editor-in-chief, expressing the warmest sympathy with him in his long illness, and their sincere hopes for his speedy and perfect restoration to health.

NEW BRUNSWICK NOTES.

BY M. CHAMBERLAIN.

Among other interesting ornithological occurrences with which the year 1882 favored observers in the vicinity of St. John was the presence of some six pairs of Pine Grosbeaks (*Pinicola enucleator*) during the entire summer, in a heavy growth of mixed woods, covering the crest of a hill overlooking the Kennebecasis River a few miles from the city.

They were first seen on June 11, when Mr. James W. Banks accidentally shot a female in the very act of arranging some dry grass on a partially formed nest. It was placed in a small spruce some seven feet from the ground and close to the trunk. About a handful of this grass, unmixed with other material, had been laid firmly upon a limb, not woven together, but appearing more like a platform for the main structure to rest upon, than the bottom of a nest. When first seen the male and female were together gathering grass on a hummock close by, and both seemed equally busy. When his mate was killed the male became much excited and exhibited deep distress, continuing for some time within three or four feet of Mr. Banks, as he sat examining the dead bird, and once alighting on a bough close to his head and

peering over his shoulder. Upon dissecting the female the eggs were found to be in an advanced condition.

During the season the remaining pairs were seen very often and closely watched, but though they were undoubtedly mated no completed nest was discovered. As the birds were exceedingly tame and easy to approach, their plumage was closely examined. No red coloring was observable, and so little difference was apparent between the males and the females that the sex could not be determined without the aid of a glass, at more than ten paces distant. During the breeding season they sang occasionally but not loudly, their song being a short and rather simple, though sweet-toned melody, which increased in strength of tone and duration toward autumn.

Last spring the Song Sparrow and the Fox Sparrow reversed the usual order of their coming, for on March 6, while we were looking for the appearance of the latter, the former species arrived in the vicinity of St. John in large flocks, accompanied by a few of their White-throated cousins.

In 1881 the Song Sparrow first appeared here on April 11, which is about an average date for their arrival. From the time of their coming in 1882 until late in April they must have been sorely pinched for food, for winter was still with us, and cold snow-storms were of frequent occurrence. During this period the birds were constantly about the streets of the city, and in the early morning thronged the wharves and busiest thoroughfares. They were also found along the shore, but their chief resort was the large tract of sand flats at the back of the town, which at low water are bare, but with each recurrence of the tide are covered by the waters of the Bay of Fundy. The mouths of the sewers emptying upon these sea-washed sands were the favorite feeding places for all the early comers, and through April a rather motley company were daily seen there together. Snow-birds, Fox, Song, and White-throated Sparrows, Robins, and Purple Finches, became shore-birds for the time, and about the middle of the month a party of Hermit Thrushes added their dignified presence to the gathering, while a squad of Crows gravely stalked about as undisturbed as if always accustomed to such high-bred society, their sombre coloring forming a marked contrast with the white plumes of the Herring Gulls who posed for a background just where the incoming waves curled and broke upon the sands.

It was among one of these groups, feeding nearest the seaward point of the flats, that Mr. Alfred Morrissey discovered a flock of Ipswich Sparrows (*Passerculus princeps*) on April 11. The species was new to this locality, for Mr. Brewster's solitary individual, taken at Point Lepreaux in April, 1876 (as recorded in this Bulletin, Vol. I, p. 52), is the only instance of its occurrence previously known. Of the birds as they appeared to Mr. Morrissey he says: "When I first saw the Ipswich Sparrows they were in company with Song Sparrows, their actions being so nearly identical that the species could only be distinguished by the difference in the length of the tail and the general color of the plumage, that of the Ipswich being somewhat the lighter.

"There were some twenty individuals in the flock, and, as they were very tame, allowing me to approach within a few yards, I was enabled to easily watch their movements during the few days they remained, they feeding always in one locality. Most of the weather while they were here was stormy, but they appeared indifferent to it and were very active, picking about in the sand, even in a snow-squall, hopping around and taking short flights, all the while uttering a sharp chirp, but not attempting any song. Of the few specimens I secured, one was merely wounded, and I placed it in a cage with a Canary, where it lived for a week, being fed during the entire time by the Canary. It was exceedingly tame, allowing one's hand to be put in the cage without disturbing it in the slightest degree."

The Fox Sparrows did not put in an appearance in the vicinity of St. John until "April-fool's day," a full week after the Wild Geese were first seen going northward. They are rarely observed here after the third week in March, but this year they remained fully a month later. By the fifth day of April they had gathered in immense numbers and were in full song. Everywhere about the city and suburbs, and at all hours, in the early dawn and in the gloaming as well as at noonday, alike indifferent to storm or sunshine, they sang as if singing were the end and aim of their existence. But theirs is a song that one does not soon tire of; indeed to my ear it is more beautiful than that of any other member of the family, entitling the species to high rank among our northern songsters. Of course such eminent performers as the Winter Wren and Hermit Thrush take precedence, and in the song of the present bird we miss many qualities for which other

species are admired. Its voice has neither the compass of the Catbird's nor the volume of the Purple Finch's, while it lacks the free abandon of the Bobolink's and the sentiment so sweetly voiced by the Vireo when he "whispers his secrets to the passing breeze." The chief characteristics of the song of the Fox Sparrow are sweetness and purity of tone, and rare beauty of expression; and in these he stands the peer of the ablest of his rivals.

When I included the Indigo Bird in my catalogue of the Birds of New Brunswick I had some misgivings as to its right to a place there; but that right has been established by an example taken at Rothesay by Mr. Henry Gilbert, in May last, and by others observed by Mr. Gould. On the 24th of the same month the occurrence of the Bluebird near St. John was confirmed, for I shot a pair at Westfield, evidently mated. I also know of numerous others having been taken or seen during the summer.

In May a small flock of Ring-necked Plover (*Ægialites semipalmatus*) and Peeps (*Actodromas minutilla*) spent a few days near St. John; although both of these species are very abundant here for several weeks in the autumn they have not before been known to occur in the spring. Piping Plover (*Ægialites melodus*) too were taken here last spring for the first time, though I am not certain that more than four specimens were observed. Two of these were shot by the Baron de Tuyll, and are now in the collection of the Natural History Society here.

The Titlark (*Anthus ludovicianus*) must also be added to the list of species occurring in St. John County, as numerous large flocks were seen here in October last.

Another of the occurrences for which the year is remarkable is that of a Whistling Swan (*Cygnus americanus*), one having been secured by George Barnhill, Esq., on April 8, at Belvidere Lake about twenty miles northwest from St. John. It was in immature plumage, but the sex was not ascertained. When first seen it was on the wing a short distance behind a flock of Wild Geese, and it followed these into an opening in the Lake, though keeping entirely separate from them.

The late records in the Bulletin by Mr. Harry Merrill and others, regarding the rarity of *Lomvia treile*, prompt me to add my quota of information, which will support the facts already recorded, as I have known of but two examples of this species occurring in this vicinity in ten years. There is not, however,

near St. John, any good collecting ground for this class of sea-birds; for many species reported as common at the mouth of the Bay of Fundy have not been taken here. *L. arra bruennichi* is an example of these.

From several letters received I am led to suspect that the correctness of the statement, made in my catalogue, that the Hudsonian Chickadee breeds in New Brunswick, has been questioned. There need not be the slightest doubt on this point, as I have seen four nests here; one in 1878, built in a stump; another in 1880, built in a telegraph post close by the railway station at Sutton; and two during last season. Of the latter, one was found near Edmunston by Mr. H. A. Purdie, and the second was found by Mr. J. W. Banks in the suburbs of St. John. These two were so similar, in position as well as construction, that a description of one will serve equally well for both. They were built in decayed stumps (apparently of firs or spruces) some three feet high and five inches in diameter. The entrance was from the top of the stump, and for the first six or eight inches was about two inches wide; then it widened gradually to three inches, which latter width was carried down another six inches to the bottom of the excavation. On the bottom a platform of hard-packed, dry moss had been placed, and upon this a second platform of felt, or felted hair, of a bluish-ash color (probably the inner fur of the common hare), and on this base rested the cup-shaped nest, which was also composed of this same felted fur. The walls of the nest were constructed with great neatness and precision, and were about two and one-half inches high and half an inch thick. In the nest found by Mr. Purdie the walls and lining were composed exclusively of fur, but in that found by Mr. Banks there was a considerable quantity of cow's hair interwoven, or rather felted, with the fur. I saw the nest at Edmunston on June 14, and the young in it were then but sparsely clothed with down and showing little signs of feathering; and when I examined the nest near St. John, on July 1, the five young which it contained were in much the same stage of development as those in the former nest had been.

In March last I witnessed a scene which convinced me that the saying "misery loves company" is as truly applicable to birds as to men. It was a keen, frosty morning in the third week of the month, a day as typical of midwinter as any that January brings us, for the snow still lay deep and firm upon the ground and

neither lakes nor streams had thawed; while the dry, thin air, though stirred by no wind, was so intensely cold that I was forced to walk very briskly and administer frequent rubs to nose and cheeks to keep at all comfortable. Passing along a suburban road about sunrise, my attention was attracted by the note of a Robin, which I soon discovered perched on a tree near by, wearing an appearance of utter wretchedness. His body was contracted as if by pain, his feathers were ruffled, and his head drooped. At long intervals he gave voice to a feeble, sad-toned note, and crouching thus, shivering with cold, hungry no doubt, and forlorn, appeared, physically and morally, but the ghostly shadow of that sprightly and vivacious Robin Redbreast that had filled the air with his blithesome carol in the happy spring-time. As I stood watching him I heard another note. Robin heard it also, and arousing a little called back. The new note was repeated and I recognized the voice as that of a Red-eyed Vireo, which I detected searching for a breakfast on the leafless branches of a distant birch. Robin's appearance was at once changed; his body and head were held erect, his feathers smoothed, and his voice rang out clear and strong. After a few more calls and a few strains of song both birds flew to a tree about mid-way between their first positions, and on approaching it to obtain a more certain identification of the Vireo, I found the pair sitting side by side on the same limb, their faces turned toward the newly-risen sun, singing away as merrily as if cold and hunger were unknown to them, or at least uncared for. They seemed indeed a joyous pair, yet there was something singularly pathetic in their very happiness. Possibly the Robin might contend successfully against the severity of our weather, as I have known many of his race to do before him. But the Greenlets ordinarily remain with us only during the warmest weather and this thoughtless fellow would, I feared, be unable to withstand the cold without a generous supply of insect food, which he would find it impossible to obtain.

After all, mused I, as I turned away, leaving the oddly assorted pair still singing, what better ending for such a life as a bird's could be desired! The cold-benumbed brain registers no pain, nor creates other than pleasing fancies. And how appropriate a death for so fairy-like a creature—to fall peacefully asleep upon the virgin snow, with the wind weaving over his stiffening form a shroud of glittering crystals.

BICKNELL'S THRUSH (*TURDUS ALICLÆ BICKNELLI*) IN NEW ENGLAND.

BY WILLIAM BREWSTER.

Upon reading Mr. Bicknell's article in the July number of this Bulletin (pp. 152-159) it occurred to me that his new Thrush must breed on our New England mountains as well as among the Catskills. This conviction was strengthened, shortly afterwards, by a letter shown me by Mr. Purdie, in which the writer, Mr. Bradford Torrey of Boston, asked if *Turdus aliclæ* was known to summer among the White Mountains, he having heard a Thrush there which he felt sure was neither the Wilson's, the Olive-backed, nor the Hermit. Acting upon the double hint I took an early opportunity to look for the interesting bird, with the following result.

On the afternoon of July 19, 1882, I started up the Mt. Washington carriage-road from the Glen House, in company with Mr. Walter Deane and Mr. James J. Greenough of Cambridge. At first our choice of a time proved unfortunate, for a succession of heavy showers prevented us from exploring the dripping thickets by the way, and forced us to push on as rapidly as possible, so that we reached the summit, shortly after dark, without having shot a bird of any kind. Thrushes were heard at various points, however, and the peculiar notes of a few met with near the Half-way House led us to hope that our quest would not prove in vain.

The following was one of those rare mornings that mountain climbers long for but seldom get. The sky was cloudless, and as the sun rose above the horizon its rays gilded the snowy banks of fog that marked the courses of distant rivers, and, touching the eastern sides of the surrounding mountains, bathed every rugged slope and beetling precipice in a flood of light, the brighter from its contrast with the gloom that still enveloped their western sides and shrouded the mysterious depths of dark ravines far below. The keen, almost frosty morning air rustled among the scant vegetation, and an occasional stronger puff heralded the coming blasts which, with other retainers of Winter's train, are

never quite banished from these elevated regions, even during mid-summer. But time was precious, and barely pausing to admire the grandeur of the scenery that surrounded us we began the descent, my companions botanizing, while I watched closely for birds.

On the very summit—or at least less than a hundred feet below it—Snowbirds (*Junco hiemalis*) were twittering among the rocks, but no other species were observed until near the end of the third mile, when the clear notes of a White-throated Sparrow rose from a thicket of dwarf birches (*Betula glandulosa*) and blueberry bushes (*Vaccinium cæspitosum*) by the roadside. A few hundred yards further down we heard a Nashville Warbler singing in a sheltered hollow among some black spruces (*Abies nigra*), the tallest of which were barely four feet high. His presence in such a spot was a forcible illustration of the law that Nature fills all her waste places, for surely he might have found a more congenial home among his kindred in the forests below.

Down to this point we had seen no trace of Thrushes of any kind, and indeed the evergreens were nowhere numerous or high enough to afford them suitable shelter. But about a third of a mile above the Half-way House, or nearly four miles, by the carriage-road, from the summit, and at an elevation of (approximately) 4000 feet, we came to a tract of firs (*Abies balsamifera*) and spruces (*A. nigra*) that seemed to promise better results. This thicket covered three or four acres of a comparatively level portion of the mountain, and extended down the face of an almost sheer precipice to the bed of West Branch in the "Gulf of Mexico" below. Over the level area the trees attained a height of about ten feet. They averaged perhaps four inches in diameter at their bases and their tops were matted and spreading. The ground beneath was moderately open, entirely free from undergrowth, and deeply carpeted with a yellowish-olive moss over which were thickly sprinkled the clover-like leaves of the wood sorrel (*Oxalis acetosella*) and, more sparingly, graceful star flowers (*Trientalis americana*) and beautiful Clintonias (*Clin-tonia borealis*), the latter still bearing their greenish-yellow blossoms. In the immediate vicinity, but not actually under the shade of the trees, we found *Pyrus americana*, *Betula papyracea* (four or five feet high), *Amelanchier canadensis oligocarpa* (three or four feet in height), *Ledum latifolium*, *Cornus cana-*

densis, *Vaccinium vitis-idaea*, *Salix cutleri*, *Arenaria grœnlandica*, *Solidago virga-aurea alpina* (with flowers on the point of opening), and *Smilacina bifolia*.

Around the outskirts of this Alpine wood the trees were shrubby and often so densely matted that it was impossible to penetrate them, but in the interior one could walk with comparatively little difficulty. As I picked my way between the stems, carefully avoiding the many dangerous holes and crevices concealed beneath the mossy floor, I was forcibly reminded of similar forests on the bleak shores of Labrador. The few sunbeams that penetrated among the branches had a pale, wintry cast, and at intervals the rising wind sighed drearily in the trees. Altogether there was about the place an air of rugged—almost savage wildness, in fit keeping with the grandeur of the surrounding scenery.

In this shaggy forest Thrushes were singing and calling on every side, and in the course of an hour or two I managed to secure three specimens, one of which was a typical Olive-back, while the other two, to my great delight, proved to be the birds of which we were in search; *viz.*, representatives of the small southern race of *T. aliciae* lately named by Mr. Ridgway in honor of its discoverer, Mr. Bicknell, and until now known only from Riverdale on the Hudson and the Catskill Mountains of New York.

Although the specimens just mentioned were the only ones actually taken, we saw and heard many others, both at the point already described, and further down the mountain, in the vicinity of the Half-way House. Nor were opportunities wanting for comparing the voice and habits of the new bird with those of its near relative *T. swainsoni*, both being frequently found together in the same thicket, although the Bicknell's Thrushes were the more numerous throughout the region of stunted spruces, while the Olive-backs predominated in the heavy timber below.

The song of Bicknell's Thrush is exceedingly like that of Swainson's; indeed, to my ear, the usual strain, though rather feebler, was nearly indistinguishable; but occasionally—perhaps on the average once in the course of five or six repetitions—a peculiar, and apparently perfectly characteristic bar was interpolated. This was a flute-like *per-pseùeo-pseùeo* given quickly and in a tone which, at a little distance, closely resem-

bled that of the Solitary Vireo's well-known voice. The respective call-notes of the two birds, however, were radically different. That of *T. swainsoni* is a musical *pip* or *peenk* as liquid in tone as the sound of dropping water. The call of *bicknelli*, on the contrary, was harsh and far from pleasing. Usually it was a single loud, penetrating *queep*, often abbreviated to *qûee*, and occasionally varied to *quedah* with a falling inflection. At a distance this note sounded not unlike the cry of a Nighthawk. Near at hand it had a peculiarly startling effect in the silence of these solitary woods, and I noticed that it left a disagreeable, jarring sensation on the ear. Once or twice it recalled the *pheu* of the Tawny Thrush, but ordinarily it was sharper and higher pitched.

In a general way the habits and actions of these Thrushes may be said to be identical, but *bicknelli* is a much shyer, noisier and more restless bird than its cousin the Olive-back. Indeed I found it next to impossible to creep within shot of one, for long before I was near enough the wary bird would take flight, to resume its singing or calling at some distant and perhaps inaccessible point on the steep mountain side below. The only successful method of proceeding proved to be that of lying in wait near the spot whence one had been driven, for in a short time it was almost sure to return, prompted, apparently, by curiosity, which I found I could stimulate by making a shrill chirping or squeaking. On such occasions the bird would approach by short, cautious flights, keeping itself so well concealed that it would often come within a few yards and retire again without once exposing itself to view. Indeed the two specimens taken were only secured by snap shots directed almost at random towards some opening in the branches where the flash of a wing betrayed its owner's movements.

Judging from the necessarily imperfect observations made during my hurried reconnoissance, the Bicknell's Thrushes are most abundant, on Mt. Washington, in the belt of stunted firs and spruces which border the upper edge of the heavy timber, at an elevation of about 3800 feet. From this point their numbers rapidly diminished as we descended, and the last one positively identified was met with at an elevation of (approximately) 3000 feet. Their range upwards is probably co-extensive with that of their favorite spruce thickets, for, as already stated, they were

found at the highest point where shelter of this kind occurred. There is, of course, no reason for supposing that they are confined to the eastern side of Mt. Washington. On the contrary it is highly probable that they are generally distributed over the upper portions of that mountain as well as on many of the higher ones of the surrounding group. Indeed they may be confidently looked for almost anywhere in New England at an elevation of over 3500 feet.

Through Mr. Bicknell's kindness I am now able to make a direct comparison between the specimens obtained on Mt. Washington and two of the Catskills examples, one of which (No. 653) figures prominently in Mr. Ridgway's original description of the new race.

My measurements of these four specimens are as follows:

653 (E. P. Bicknell) ♂ ad., Slide Mt., New York, June 15, 1881. Wing, 3.65; tail, 2.96; culmen from feathers, .50; from base, .68; depth of bill at nostrils, .16.

717 (E. P. B.) ♂ ad., Slide Mt., June 27, 1882. Wing, 3.60; tail, 2.73; culmen from feathers, .54; from base, .67; depth of bill at nostrils, .18.

7389 (W. B.) ♂ ad., Mt. Washington, July 20, 1882. Wing, 3.74; tail, 2.93; culmen from feathers, .49; from base, .64; depth of bill at nostril, .15.

7390 (W. B.) ♂ ad., same locality and date. Wing, 3.60; tail, 2.79; culmen from feathers, .52; from base, .67; depth of bill at base, .16.

The Mt. Washington birds are in worn breeding plumage. They are plain grayish-olive above and along the flanks, with a slight tinge of reddish on the tail, and more or less fulvous over the jugulum and throat. Their general coloring is identical with that of average spring specimens of *T. aliciæ* and very much grayer than in Mr. Bicknell's No. 653, which, however, is probably an exceptional specimen, for his No. 717, obtained in the same locality June 27, 1882, is but a trifle browner than the New Hampshire skins. The latter come well within the limits of size given for *bicknelli*, and their bills are fully as slender and depressed as in Mr. Bicknell's most extreme specimen (No. 653). This peculiar shape of the bill, already remarked upon by Mr. Ridgway, is a striking point of difference between them and all of a large series of Gray-cheeked Thrushes which I have collected in New England during the migrations. But although seemingly confined to the smaller race, it is an inconstant character, for Mr. Bicknell's No. 717 has a bill as stout as in many of my largest *aliciæ*. Taking size as the sole test (and it is the only one posi-

tively claimed by Mr. Ridgway) I find that of Massachusetts specimens captured during the migrations, my series includes five that fall within the extremes assigned to *bicknelli*, to which, necessarily, they, with the Mt. Washington examples, must now be referred.

While it is perhaps unsafe to base any very positive conclusions on the material at present available, there seems every reason to believe that this small race will prove a reasonably constant one, at least as represented along the southern borders of its breeding range. However this may be, the long-disputed question of the character of the relationship borne by *T. aliciæ* to *T. swainsoni*, is, as Mr. Bicknell has pointed out, at length definitely settled. Those who from the first have maintained their specific distinctness have surely good reason to exult in this final victory.

Our satisfaction at the acquisition of this Thrush, new specifically to the summer fauna of New England, and, as a variety, previously unrecognized from within its limits, can scarcely fail to be tempered with chagrin that so interesting a stranger has all this time existed among us undetected. Yet when we pause to reflect, there is the consolation—barren though it be—that our higher mountains have never been adequately explored by ornithologists; and who can say that they do not hold further surprises? With their Alpine flora and cold climate they offer conditions favorable to the requirements of many northern-breeding birds, and it is by no means improbable that several such, at present known only as migrants through New England territory, may eventually be found to pass the summer in their remote fastnesses. At all events the field is well worth further investigation.

NOTES ON AN HERMAPHRODITE BIRD.

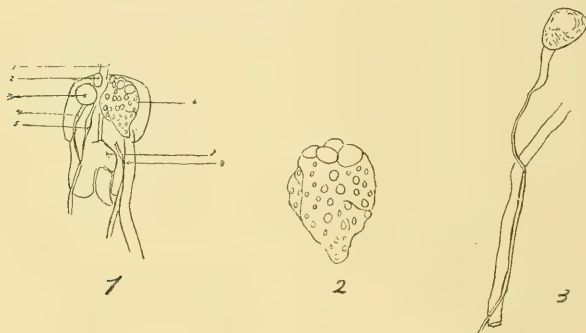
BY J. AMORY JEFFRIES.

A short time ago I received the body of a Green-tailed Towhee (*Pipilo chlorurus*), which forms the subject of the following description. The bird was shot by Mr. Brewster, at Colorado

Springs, on May 16, 1882. In plumage it resembled females of the species, but on dissection to determine the sex, both an ovary and a testicle were found; the one on the left the other on the right side. After examination by Mr. Brewster and Mr. J. A. Allen, the body was placed in water to prevent its drying, no alcohol being at the time procurable. Two days later the body was transferred to a small quantity of alcohol, in which it remained until presented to me.

When opened to determine the sex the body was cut on one side and the cloaca cut off from the rectum and the ducts, besides more or less injury being done to the mesenteries. Below follows a description of the anomalous organs, the kidneys, female and male structures.

The kidneys, of the usual structure found among the Sparrows, were perfectly normal in their anterior halves; the posterior halves, however, were anomalous. The left kidney was much diminished in width at the expense of the inner portion; the right kidney, on the contrary, was much wider than usual and extended



across the vertebral column and apparently—the specimen was somewhat broken—joined the left kidney by an isthmus.* From the posterior border of the isthmus depended a lobe in front and to the left of the vertebral column. Accordingly while the aorta (1, Fig. 1) and the pelvis (5) of the kidneys are to be seen in the anterior parts, these structures are posteriorly covered to a considerable degree. The substance of the kidneys was perfectly normal and with a smooth surface. The ureters were normal in every respect.

* This condition is sometimes found in man, where it is known as the horse-shoe kidney.

The supra-renal bodies (2, Fig. 1) were of fair size for an adult bird, and were wedged in between the heads of the kidneys and the aorta.

The ovary (6, Fig. 1 and Fig. 2) was entirely normal in position and appearance, and presented the usual resemblance to a bunch of grapes. It measured about .35 by .24 of an inch, the ova varying from .07 of an inch down. In all there were about forty ova easily visible to the eye. These, as shown by the microscope, were perfectly normal, and were fully as large as the ova of females of the species shot at the same time. The ovary was hung from the body, directly below the head of the left kidney, by the usual peritoneal foulds, and also separated by a median fould, the mesentery, from the right side.

The oviduct, normal in appearance and position, was but slightly convolute and not dilated. So sexual action had not fully commenced.

No vas deferens was to be found on the left side.

The testicle (3, Fig. 1 and Fig. 3), much shrunken on account of its maceration and sudden plunge into alcohol, was the least preserved part of the whole body. It was in its usual position on the right side, and was perfectly distinct from either the kidney or suprarenal body. Through the outer tunic a few convolutions could be seen.

The vas deferens extended from the testicle back in front of the right kidney and outside the pelves to the middle part of the right ureter. Here it crossed and became internal, but recrossed and again became external before reaching the cloaca. Near the kidney it was good sized, but shortly tapered down to a thread in very close connection with the wall of the ureter. The vas deferens was perfectly normal in structure for a bird before rut, but abnormal in relation to the right ureter.

There was no trace of an oviduct on the right side.

Since almost all the cases of reported lateral hermaphroditism have been, at one time or another, explained away as abnormal growths, or remains of the Wolffian bodies, I deemed it best to subject the testicle to a microscopic examination. The tunica albuginea, though by no means thick, was quite strong and composed of connective tissue. From its inner surface hung a few small threads, probably vessels and trabeculæ. The tunic was pierced at the vertebral surface by the vas deferens, vessels and

nerves. The substance of the testicle had evidently undergone considerable loss and by no means filled up the tunica albuginea.

When picked to pieces the substance of the gland was found to consist of rather small coiled tubes—the tubuli seminiferi,—blood-vessels and nerves. The tubes were naturally much decayed and went to pieces at the slightest touch. They stained but poorly with any reagent. The tubules were carefully examined with a high power for spermatozoa. No satisfactory evidence of their existence could be discovered, though two or three bodies which may have been developing spermatozoa were found. The histology of the tubules themselves seemed perfectly normal.

The blood-vessels, which entered with the vas deferens, branched and split up into capillaries which extended out to the surface of the organ.

In closing the description I would say that great care was taken to guard against all possible mistakes of identification, caused by diseased growth, remains of embryonic structures, or malformations, also that the testicle did not present the slightest resemblance to a modified *right* ovary; the true nature of the gland was undoubted.

There can therefore be no doubt but that the specimen is a perfect example of lateral hermaphroditism, the left side being like that of a normal female, and the right very much like that of a normal male, the abnormal condition of the kidney very likely explaining the slight change in relations of the genital and urinary ducts. That no spermatozoa were found does not prove the testicle to have been functionless, since the period of rut had not commenced. This of course assuming that no spermatozoa were found—a point I cannot positively assert—and that spermatozoa would have been found had they existed in the gland. Considering the decayed state of the gland, I doubt if the latter condition would hold good.

Similar cases are very rare and but three have, so far as I know, been reported for birds, while Quain's Anatomy* in referring to man, reads as follows: "Extremely rare forms referable to the possible coexistence of the productive parts of testicle and ovaries in the same individual, usually combined with more or less of the foregoing kinds of malformation." This

* Quain's Anatomy, Eighth Edition, Vol. II, p. 825.

statement is thus worded on account of the doubt connected with many of the descriptions. There are, however, three cases reported as occurring in hens which are comparable. The first case, that reported by Bechstein,* was a chicken with a testicle on the right side and an ovary on the left, that is much like the *Pipilo*. The two cases reported by Simpson † were less perfect. One was simply a female bird with a half developed vas deferens on the right side, the other had a vas deferens on each side. In both cases there were slight mixtures in the habits and plumage of the two sexes.

In the *Pipilo* each side was perfect after its sex and showed no resemblance to the other sex, thus separating it from the second example given by Simpson. The natural explanation is that the two generative mounds took on the two sexes and that the accessory structures followed the master organs. So the Wolffian duct remained on one side and the Mullerian on the other.

ON A COLLECTION OF BIRDS LATELY MADE BY MR. F. STEPHENS IN ARIZONA.

BY WILLIAM BREWSTER.

(Concluded from Vol. VII, p. 212.)

122. ***Antrostomus nuttalli* (Aud.) Cass.** NUTTALL'S WHIP-POOR-WILL.—Although these Whip-poor-wills were common in many of the localities visited but few specimens were taken, a fact largely owing to their nocturnal habits. They were oftenest heard in rocky places, especially among foot-hills. One killed near Tombstone, on the evening of April 8, frequently alighted on the ground to pick up beetles.

123. ***Chordeiles acutipennis texensis* (Lawr.) Ridgw.** TEXAN NIGHTHAWK.—Represented in the collection by nine specimens from the following localities: Santa Rita Mountains,

* Naturgeschichte der Voegel, Bd. II, p. 1219.

† Article, Hermaphroditism, Todd's Ency. of Anatomy and Physiology.

(♂ and ♀, May 16); Tucson (♂ and ♀, June 8); Camp Lowell (♀ June 21, three ♂ and one ♀ June 22).

124. **Picus villosus harrisi** (Aud.) Allen. HARRIS'S WOODPECKER.

40, ♂ ad., Chiricahua Mountains, March 14. Length, 9.10; extent, 15.60; wing, 4.93. "Iris brown. Common here among pines."

125. **Picus scalaris** Wagl. TEXAN SAPSUCKER.—Common. A nest containing four eggs was found April 19, at Tucson.

A male taken April 15, at Cienega Station, differs from the other Arizona specimens as follows: The red of the head is restricted to a stripe above and behind the eye and to a broad band on the occiput, the entire forehead and crown being black finely spotted with white. In these respects it agrees with descriptions of var. *lucanus*, but the tail-markings are as in *scalaris* proper. A female in first plumage (No. 441, Tucson, May 26) has the crown dull red, the occiput black, the plumage beneath thickly spotted, and the dorsal bars dull and ill-defined.

126. **Picus stricklandi** Malh. STRICKLAND'S WOODPECKER.—The explorations of the past season developed little of importance regarding this Woodpecker, save the fact of its occurrence among the Santa Rita Mountains, where Mr. Stephens found it nearly as abundant as in the Chiricahua range. His efforts to obtain its eggs were unsuccessful, but a nest containing young was discovered May 16. "The shell of the tree (a sycamore) was very hard, and as I had only a pocket knife to cut with, I did not attempt to open the hole. The voices of the young sounded as if they might be about two weeks old." The above date would indicate that this Woodpecker is a rather early breeder, an inference which is further sustained by the fact that a female, taken April 1, "would have laid in two or three weeks."

The fourteen specimens collected show a remarkable amount of variation in respect to the spotting of the under parts. In some examples the markings are small, tear-shaped, and confined chiefly to the sides and a scarcely continuous band across the breast, the median line of the body being nearly immaculate, and the throat absolutely so. In others the feathers of the throat (but not of the chin) have fine brown shaft-streaks, and the remainder of the under plumage is so thickly and coarsely spotted that its light ground-color is often nearly obliterated. Between these extremes are many intermediate styles, scarcely any two birds being exactly alike. The increase in the size and number of spots is usually correlated with a decrease in the amount of white on the tail. Normally the outer feathers have three white spaces continuous across both webs; the second pair two. But with heavily-spotted birds the white on the second feather is sometimes confined to a single pair of sub-terminal spots

(which are not confluent at the shaft) and one or two shallow scallops on the outer web; while the exterior feathers have the white much restricted (but never interrupted except near their bases) by the increased width of the black bars.

A male and female from the Santa Rita Mountains are curiously tinged with reddish-brown. In the male this color is very generally distributed both above and beneath, while on the interscapulars and some of the primaries it deepens to reddish-chestnut. Possibly it is a stain caused by contact with bark or decaying wood, but the whole plumage is so evenly dyed that this explanation is hardly satisfactory. The female of this pair is also peculiar in possessing a continuous but partially concealed *nuchal band* of brownish-orange, which, on the sides of the neck, is fully exposed, but behind can be seen only upon raising or otherwise disarranging the feathers. Both specimens seem to be adult birds.

23, ♀ ad., Cave Creek, March 7. Length, 8.10; extent, 14; wing, 4.55; tail, 3.25; culmen, .98.

42, ♂ ad., Morse's Mill, March 14. Length, 8.10; extent, 14.30; wing, 4.61; tail, 3.31; culmen, 1.16.

43, ♀ ad., same locality and date. Length, 7.90; extent, 14.20; wing, 4.45; tail, 3.03; culmen, .96.

117, ♀ ad., Morse's Mill, March 27. Length, 8.10; extent, 14.40; wing, 4.46; tail, 3.38; culmen, 1.05.

129, ♂ ad., Morse's Mill, March 30. Length, 8.40; extent, 14.20; wing, 4.53; tail, 3.20; culmen, 1.22.

143, ♀ ad., Morse's Mill, April 1. Length, 7.70; extent, 14.

144, ♀ ad., same locality and date. Length, 8.20; extent, 14.40; wing, 4.55; tail, 3.27; culmen, 1.05.

156, ♂ ad., Morse's Mill, April 2. Length, 7.80; extent, 14.30; wing, 4.44; tail, 2.92; culmen, 1.15.

358, ♀ ad., Santa Rita Mountains, May 12. Length, 7.40; extent, 14.20; wing, 4.37; tail, 2.90; culmen, 1.03.

379, ♂ ad., Santa Rita Mountains, May 14. Length, 8.60; extent, 14.70; wing, 4.45; tail, 3.23; culmen, 1.25.

398, ♀ ad., Santa Rita Mountains, May 17. Length, 7.80; extent, 14; wing, 4.32; tail, 3.05; culmen, .99.

399, ♀ ad., same locality and date. Length, 7.90; extent, 14.10; wing, 4.40; tail, 3.18; culmen, 1.06.

127. **Sphyrapicus varius nuchalis** Baird. RED-NAPED WOODPECKER.—Met with during March, in the Chiricahua Mountains. It was found among scrubby pines and was not common. The stomachs of the specimens dissected contained small black ants.

128. **Sphyrapicus thyroideus** (Cass.) Baird. WILLIAMSON'S WOODPECKER.—Two specimens, both females, were taken early in March in the Chiricahua Mountains. One of these birds

had "innumerable eggs of some parasite between the muscle and skin on the upper side of the wings."

129. **Centurus uropygialis Baird.** GILA WOODPECKER.— One of the four specimens obtained during the past season is accompanied by the following notes: "Nine miles east of Tombstone, April 8. This point is the furthest east that I have seen this Woodpecker. I did not find it on the upper Gila. The present specimen was among oaks and walnuts which were sparingly distributed along an arroya. They usually frequent mesquites or giant cactuses, but the latter are wanting here and the mesquite is only a low shrub." The remaining three skins were taken June 1 and 2, at Camp Lowell.

Juv., first plumage, ♀ (No. 477, Camp Lowell, June 2). Crown with faint transverse vermiculations of dull brown. The white of the back and wings tinged with smoky-brown. Abdomen reddish-saffron. Otherwise like adult of the same sex.

130. **Melanerpes formicivorus bairdi Ridgw.** CALIFORNIAN WOODPECKER.— Found only among the Chiricahua Mountains where a few specimens were taken about the middle of March. "In Arizona and New Mexico I have never seen acorns buried in the bark of trees by this bird, as is its common practice in California. Otherwise there is little difference in their habits in the two regions."

One of the Arizona examples—a female—has nearly the whole of the black pectoral crescent streaked with white, thus showing an approach to certain more southern races.

131. **Colaptes auratus mexicanus (Sw.) Ridgw.** RED-SHAFTED FLICKER.

115, ♂ ad., Chiricahua Mountains, March 26. Length, 12.90; extent, 20.90. "Iris dark brown. Stomach contained ants. Common here but invariably shy." This specimen has a few red feathers on the nape.

132. **Colaptes chrysoides (Malh.) Baird.** MALHERBE'S FLICKER.—Mr. Stephens regards the distribution of this species in Arizona as coextensive with that of the giant cactus, for he has never seen it excepting where this singular plant grows. In coming from California by the Mohave route, in 1880, the first cactuses were met with on the Big Sandy River, a tributary of the Bill Williams River, and *C. chrysoides* was there observed for the first time. During the past season the birds were found in moderate numbers both at Tucson and Camp Lowell. Their notes were indistinguishable from those of *C. mexicanus*, and in a general way their habits were much the same. They were

fond of sitting on the tops of the cactuses, whence they could command an uninterrupted view of the surroundings. Several nests were found, but as all were in thorny cactus trunks the eggs were inaccessible. A female shot April 20, as she flew from her nesting-hole, proved on dissection to be laying.

Juv., first plumage, ♂ (No. 475, Camp Lowell, June 2). Differing from the adult in having the forehead, and crown anteriorly, washed with claret-red; the back and wings ashy-brown in strong contrast with the rufous-brown of the head; the primaries broadly tipped with brownish-white; the under parts darker with finer spotting; and the black pectoral crescent reduced in size and restricted to the middle of the breast.

Juv., ♀ (No. 476, Camp Lowell, June 2). Similar to the young ♂, but lacking the red moustache and the claret wash on the forehead and crown.

One of the adults before me (No. 243, ♀, Tucson, April 20), differs from the typical condition in having the yellow of the wings and tail replaced by orange, while the shafts of many of the feathers show an even stronger reddish cast, those of the rectrices at their bases being especially deep in color. The crown, also, is darker than in my other specimens. This departure from the normal coloring undeniably narrows the gap which separates *chrysoïdes* from *mexicanus*, but it may be merely a chance reversion, or what is perhaps still more likely, the specimen in question may be a hybrid.

243, ♀ ad., Tucson, April 20. Length, 11.60; extent, 18.70; wing, 5.55; tail, 3.95; culmen, 1.76. "Iris brown; bill black; legs greenish. Stomach contained insects and small seeds."

459, ♀ ad., Camp Lowell, May 31. Length, 11.20; extent, 18.60; wing, 5.65; tail, 4.08; culmen, 1.67.

469, ♂ ad., Camp Lowell, June 1. Length, 11.70; extent, 18.80; wing, 5.70; tail, 4.28; culmen, 1.63.

475, ♂ juv., first plumage, Camp Lowell, June 2. Barely able to fly.

476, ♀ juv., first plumage, same locality, date, and remarks.

594, ♂ ad., Camp Lowell, June 25. Length, 11.40; extent, 18.40.

133. **Ceryle alcyon** (Linn.) Boie. BELTED KINGFISHER.

321, ♀ ad., Tucson, May 3. Length, 13.60; extent, 22.40; wing, 6.35; tail, 4.12; culmen, 2.44. "Iris dark brown; bill black, pale at base below; legs dark. Several frequent the river here."

134. **Geococcyx californianus** (Less.) Baird. CHAPARRAL COCK.—"I have not found them common either in Arizona or New Mexico, but they are abundant in Southern California, and I have seen three or four in Colorado. They run rapidly, putting a horse to pretty good speed to overtake them. If pursued by a dog they will often take to a small tree, and on such occasions they can be closely approached. They can increase their speed when running by the use of their wings, and they

can also rise into a tree by taking a running start and then sailing on spread wings. They do not attempt any real flight, however. Their food includes lizards, snakes, grasshoppers, beetles, etc."

456, ♂ ad., Camp Lowell, May 31. Length, 23.10; extent, 21.50. "Iris dark brown with a narrow light-yellow ring next the pupil; bill dull brownish-black; feet pale bluish; scutella of tarsi dull yellowish; bare space on sides of head, dull blue about the eye, whitish for a small space behind the eye, and still farther back, red with a yellowish tinge."

135. **Coccygus americanus** (Linn.) Bonap. YELLOW-BILLED CUCKOO.

512, ♂ ad., Tucson, June 8. Length, 12.60; extent, 17; wing, 6; tail, 6.57; culmen, 1.13. "Iris brown; legs dark greenish-brown; bare orbital space much the color of the surrounding feathers. This is the first specimen that I have seen in Arizona."

527, ♂ ad., Tucson, June 12. Length, 12.30; extent, 16.70; wing, 5.94; tail, 6.47; culmen, 1.13. "Two others seen to-day."

136. **Scops asio trichopsis?** (Wagl.) Brewster. MEXICAN SCREECH OWL.

The specimens catalogued below are unmistakably referable to the so-called *trichopsis** of our South-western border, a form which, as I have lately stated, grades into *asio* through the California race *bendirii*. There is a doubt, however, as to whether Mr. Ridgway's *trichopsis* is really the *trichopsis* of Wagler, and this question, I believe, still remains unsettled. Mr. Henshaw's Arizona specimens were referred to *macalli*, but as that race is now restricted, within the United States, to the Valley of the Lower Rio Grande, in Texas, they probably belong here.

488, ♀ ad., Camp Lowell, June 3. Length, 8; extent, 21.20; wing, 5.52; tail, 3.20. "Iris yellow; bill black, paler at tip; toes pale. Parent of the next."

489, ♀ juv., first plumage, same locality and date. "Shot by moonlight among low mesquites. Call-note a kind of *chuck*, different from anything that I have previously heard. There were others, probably the remainder of the brood, but after I had shot the parent they remained silent.

137. **Bubo virginianus subarcticus** (Hoy) Ridgw. WESTERN HORNED OWL.—The female of the pair mentioned below was shot as she flew from her nest, which was built in a mesquite at a height of about fifteen feet. It contained a recently hatched bird and one added egg. The latter measures 2.15×1.75 .

*See this Bulletin, Vol. VII, p. 32.

347, ♀ ad., Tucson, May 7. Length, 20.80; extent, 53.20; wing, 14.50; tail, 8.50. "Iris yellow; bill and claws black. The stomach contained beetles, portions of craw-fish and a few fish scales."

561, ♂ ad., Camp Lowell, June 21. Length, 19.20; extent, 49.20; wing, 13.12; tail, 8.

138. **Glaucidium gnoma** *Wagl.* CALIFORNIA PYGMY OWL.—The single specimen obtained by Mr. Stephens differs from my California examples in absolutely lacking any tinge of umber or reddish-brown both above and below, the ground color of the upper parts being dark brownish-plumbeous, and the longitudinal streaks beneath nearly black. This condition, doubtless, is merely an extreme one of the bird's recognized "plumbeous" phase.

89, ♂ ad., Chiricahua Mountains (10,000 feet) March 24. Length, 6.50; extent, 13; wing, 3.50; tail, 2.90. "Iris yellow. This bird was sitting on the extreme top of a dead pine. I heard another but failed to find it. The note was repeated a number of times at intervals of about once a second. I saw a flock of four near Fort Bayard, New Mexico, in 1876."

139. **Glaucidium ferrugineum** (*Maxim.*) *Kaup.* FERUGINEOUS PYGMY OWL.

482, ♂ ad., Camp Lowell, June 3. Length, 7; extent, 13.40; wing, 3.60; tail, 2.90. "Iris yellow, bill greenish-yellow; cere yellowish-green; toes dull greenish-yellow; claws black. In some cottonwoods near camp I heard this individual—or another of the same species—for several consecutive mornings. His note was a loud *cuck* repeated several times as rapidly as twice each second. At each utterance the bird jerked his tail and threw back his head. Occasionally a low *chuck*, audible for only a short distance, replaced the usual call."

140. **Micrathene whitneyi** (*Cooper*) *Coues.* WHITNEY'S PYGMY OWL.—In 1872 Capt. Bendire secured several specimens of this pretty little Owl near Tucson, but no one seems to have since met with it in Arizona, and up to the present time it has remained a rare and little-known species. This, doubtless, has been chiefly owing to the fact that the Territory has been only superficially explored, for Mr. Stephens found it a very common bird in the desert region about Tucson and Camp Lowell. His first specimen was obtained in the following manner. Happening one day to cut down the trunk of a giant cactus for the purpose of investigating a Woodpecker's hole, he found a Whitney's Owl within, dead, but apparently only just killed by the fall. The hint was at once acted on with results disastrous to both Owls and cactuses, for an extensive raid on the latter, continued during several weeks in different localities, yielded a goodly num-

ber of the coveted birds. Those taken from holes were all females, but some males were afterwards shot in elder and willow thickets. The notes accompanying two specimens obtained June 3 at Camp Lowell are so interesting that I transcribe them in full. "I was walking past an elder bush in a thicket when a small bird started out. Thinking it had flown from its nest I stopped and began examining the bush, when I discovered a Whitney's Owl sitting on a branch with its side towards me and one wing held up, shield-fashion, before its face. I could just see its eyes over the wing, and had it kept them shut I might have overlooked it, as they first attracted my attention. It had drawn itself into the smallest possible compass so that its head formed the widest part of its outline. I moved around a little to get a better chance to shoot, as the brush was very thick, but whichever way I went the wing was always interposed, and when I retreated far enough for a fair shot I could not tell the bird from the surrounding bunches of leaves. At length, losing patience, I fired at random and it fell. Upon going to pick it up I was surprised to find another, which I had not seen before, but which must have been struck by a stray shot." Rather curiously both of these specimens proved to be adult males. It is by no means certain, however, that the males are not to a certain extent gregarious during the breeding season, for on another occasion two more were killed from a flock of five which were sitting together in a thick bush.

Judging from the notes at hand these little Owls are strictly nocturnal in their habits. With the evening twilight they came forth from their retreats and were sometimes dimly seen, but oftener heard calling to one another. They had several different notes, one of which sounded like the syllable "*churp*"; while another was a low "*tw-jur rrr*." These cries were heard at all times of the night, but oftenest in the early evening and again at daybreak.

During Mr. Stephens's raid on the cactuses several nests were discovered. These were invariably in deserted Woodpeckers' holes and usually at such a height that the trunk had to be felled. In every case this resulted in the breaking of the eggs, but one of the accessible nests fortunately contained a sound specimen. This egg is broadly ovate in shape, and measures 1.07X.91. The shell, which is clear white, is slightly rough-

ened by numerous pores, but it nevertheless has a decided polish. Fresh eggs were found from May 10 to June 27, dates which indicate that the species breeds rather late in the season.

Juv., first plumage. ♀ (No. 608, Camp Lowell, June 28). Above plumbeous-ashy, the forehead spotted with pale rufous, the back indistinctly barred with reddish-brown; wings and tail marked as in the adult, but with rusty-brown instead of pale rufous; beneath ashy-white, barred everywhere—but most heavily on the breast—with ashy-brown; throat tinged with rufous. Another specimen, which is apparently a little older, has the back sparingly marked with rusty.

Among sixteen adult birds I find remarkably little individual variation. Some specimens, however, are rather more coarsely spotted above than others, and the color of the longitudinal streaks beneath varies, in the different examples, from ashy-brown slightly tinged with rufous to a decided rusty-chestnut. There is apparently no sexual difference, even in respect to size. The extremes are as follows:

Largest ♂, length, 6; extent, 15.10; wing, 4.33; tail, 2.26.

Smallest ♂, length, 5.60; extent, 14.60; wing, 4.20; tail, 2.19.

Largest ♀, length, 5.90; extent, 15.20; wing, 4.27; tail, 2.16.

Smallest ♀, length, 5.60; extent, 14.90; wing, 4.23; tail, 2.11.

141. **Falco sparverius** *Linn.* SPARROW HAWK. — The Sparrow Hawk was a common and generally distributed species in all the regions traversed. I have already, in another connection,* mentioned the finding of its feathers in a cave near Gayleyville.

"Iris dark brown; bill bluish, blackening at tip; legs light yellow."

142. **Polyborus cheriway** (*Jacq.*) *Caban.* CARACARA EAGLE. — Heermann is accredited with having found this species "abundant" on the Rio Gila and Colorado near Fort Yuma, but I cannot learn that it has ever been detected elsewhere in Arizona. Its presence at Tucson, as attested by the following specimen, is therefore of some interest.

348, ♂ im., Tucson, May 9. "Iris brown; bill pale green at base, becoming nearly white at tip; bare portions of the head dull purplish-red, whitish under the eyes; legs white with a yellowish tinge. This individual was in company with Turkey Buzzards and Ravens at a slaughter-house; It was wilder than the other birds, being the first to fly when I approached the spot. I was told of another individual which sometimes accompanied it."

143. **Pandion haliaetus carolinensis** (*Gm.*) *Ridgw.* FISH HAWK. — The only mention of this species which I find among the present notes, is an incidental reference to an individual seen near Tucson on April 23.

* This Bulletin, Vol. VII, p. 211.

144. **Accipiter cooperi Bonap.** COOPER'S HAWK.—This Hawk was occasionally seen during Mr. Stephens's visit to the Santa Rita Mountains. On May 18 a nest was found in the fork of a green oak at a height of about thirty feet. It had apparently been used several seasons. The eggs, which were slightly incubated, measure respectively 1.92×1.41 ; 1.93×1.42 ; 1.91×1.40 ; 1.92×1.40 . The parent birds were exceedingly shy, but one of them was finally killed with a rifle-ball.

406. ♂ ad., Santa Rita Mountains, May 18. Length, 16.70; extent, 30; wing, 9.38; tail, 8.44. "Iris brownish-red; cere, greenish-blue; legs, greenish-yellow. Taken with set of four eggs."

This specimen is absolutely indistinguishable from some of my Massachusetts examples.

145. **Buteo abbreviatus Caban.** ZONE-TAILED HAWK.—This fine Buteo was met with only at Tucson, where three specimens were taken. Of the first Mr. Stephens writes: "I was standing on a dam that crossed the river at the head of an irrigating ditch, when below me a Vulture, as at the time I supposed it to be, attempted to catch some minnows in a shallow place, fluttering over the water and trying to snatch up the little fish with its feet. Failing in this it alighted on the dam near me when I fired and killed it." This occurred in April. Later in the season (June 7) a fine adult pair was obtained near the same place but under somewhat different conditions. "I was looking for nests among the mesquites when the male of this pair came circling over me. Upon shooting him the female appeared, and I succeeded in getting her also. Feeling sure that they had a nest, I began to search the surrounding trees and soon discovered it,* well hidden by bunches of mistletoe."

Dr. Coues took a Zone-tailed Hawk on the Gila River, Sept. 24, 1864, and this, so far as I know, is the only identified Arizona specimen which has been previously announced. I cannot help thinking, however, that the bird which Capt. Bendire found breeding in Arizona in 1872 really belonged to this species, as he at first supposed, and not to *Urubitinga anthracina*, as afterwards surmised by Mr. Henshaw. Nor is it improbable that the black Hawks seen by the latter gentleman near Camp Bowie were also referable here.

311. ♂ im., Tucson, April 30. Length, 18.70; extent, 49.50; wing, 15; tail, 8.75; culmen (chord from cere), .88. "Iris brown; bill black, green-

* The notes do not state what this nest contained.

ish at base both above and below; cere, legs, and feet, yellow; claws black. The stomach contained two lizards, a few fish scales and some feathers. Sexual organs very minute." This specimen is in nearly the same plumage as the one described by Mr. Ridgway in "History of North American Birds" (Vol. III, p. 273).

501, ♂ ad., Tucson, June 7. Length, 19.20; extent, 48.40; wing, 15.60, tail, 9.15; culmen (chord from cere), .73.

502, ♀ ad., same locality and date. Length, 21.20; extent, 53.10; wing, 16.88; tail, 10; culmen (chord from cere), 1.

146. **Asturina nitida plagata** (Licht.) Ridgw. MEXICAN GOSHAWK. — "A common species in some of the mesquite groves about Tucson. Flight Falcon-like and very swift. The cry is a loud '*crur*' repeated four or five times in succession. At a distance it sounds much like the scream of a Peacock."

The stomachs of the specimens examined contained lizards, small squirrels, fish scales, the wing-covers of beetles, and unrecognizable fur and bones of small rodents. A nest found May 2, was placed in the fork of a cottonwood about forty feet above the ground. It was composed outwardly of cottonwood twigs and was lined with leaves. The single egg which it contained is white with a faint bluish tinge. It is ovate in shape and measures 2.04×1.65 .

Among the adults collected by Mr. Stephens I find little variation in either color or markings, and the sexes differ only in size. A male killed early in May represents the now well-known immature condition which curiously resembles that of the Broad-winged Hawk.

244, ♀ ad., Tucson, April 20. Length, 17.90; extent, 37.20; wing, 11.12; tail, 8. "Iris dark brown; bill and claws, black; cere, legs, and feet, bright yellow. Laying, but had not completed her set."

250, ♀ ad., Tucson, April 21. Length, 17.70; extent, 34.90; wing, 11.34; tail, 8.

302, ♂ ad., Tucson, April 28. Length, 16.30; extent, 32.10; wing, 10.38; tail, 7.50.

305, ♂ ad., Tucson, April 29. Length, 16.20; extent, 33.10; wing, 10.18; tail, 7.12.

323, ♂ ad., Tucson, May 3. Length, 16.30; extent, 33.90; wing, 10.50; tail, 7.88.

330, ♂ im., Tucson, May 4. Length, 16.50; extent, 33.40; wing, 9.95; tail, 7.94. "Iris brown; bill and claws, bluish-black; cere, rictus, legs and feet, yellow."

147. **Cathartes aura** (Linn.) Illig. TURKEY BUZZARD. — Incidentally mentioned in the notes as being common near Tucson. A large Vulture seen at Cave Creek, March 7, was thought by Mr. Stephens to be *Pseudogryphus californianus*.

148. **Zenaidura carolinensis** (Linn.) Bp. CAROLINA DOVE.—An abundant species throughout most of the regions traversed.

149. **Melopelia leucoptera** (Linn.) Bp. WHITE-WINGED DOVE.—This Dove was not uncommon about Tucson, where specimens were taken at intervals between April 26 and May 23. They frequented the mesquite tracts and fed largely on mesquite "beans." Their notes were similar to those of the Turtle Dove, but hoarser, and uttered with more apparent effort. They were usually rather shy.

On the journey to California they were occasionally seen in dreary deserts where few other birds seemed able to support life. At Yuma they were actually common, but none were found to the westward of this point. A nest obtained July 8, on the Gila River, was placed in a mesquite on the side of a sand-hill. It contained two eggs, slightly incubated, which measure respectively $1.30 \times .91$ and $1.20 \times .92$. Arizona skins are identical with Texas ones.

"Iris dark orange; bill black; legs dull red; bare orbital space blue."

150. **Chamæpelia passerina** (Linn.) Swains. GROUND DOVE.—Rather common about Tucson, where a number of specimens were obtained.

The Arizona males in my series are much lighter colored than those from Florida, and their bills, instead of being yellow or dull orange, as in eastern birds, are pure Indian red, with the usual dusky tip. These differences appear to be constant, but my material is not sufficiently extensive to enable me to judge of their bearing or importance.* In some generalizations, based upon the examination of fifty-six examples in the Smithsonian Museum, Mr. Ridgway says:† "As a rule, Florida and West India skins are most deeply colored," but he does not mention any variations in the color of the bill, which is simply described as "yellow."

"Iris pink (No. 300); pinkish-brown (No. 301); bill red, tipped with blackish; feet and legs pale flesh-color."

151. **Lophortyx gambeli** Nutt. GAMBEL'S QUAIL.—Specimens were obtained near Tucson, and others noted at and beyond Walters, a station in the Colorado Desert. The first *Lophortyx californicus* were met with in the San Gorgonio Pass, a day's drive to the westward of where the last Gambel's Partridges were seen.

*Prof. Baird has described a var. *pallescens* from Cape St. Lucas, to which these specimens are possibly referable. See Proc. Acad. Nat. Scien. Philad., 1859.

†History of North American Birds, Vol. III, p. 390.

152. **Callipepla squamata** (Vig.) Gray. SCALED QUAIL.

—These Quail were usually met with in the most barren places, often in deserts miles from any water. They were commonly found in flocks of from six to ten, but as many as thirty were occasionally seen together. They were so shy and difficult to obtain that Mr. Stephens rarely got more than one from a flock. He traced them westward to Picacho Station (Southern Pacific Railroad) beyond which point he thinks they do not extend.

Some time since I called attention* to certain points of difference between Texas and Arizona specimens of the Blue Quail, suggesting the name "*pallida*," for the Arizona representative in the event of its proving distinct. More recent examination of material from various localities has confirmed the stability of these differences, which are certainly sufficient to warrant the recognition of a new race. I find, however, that Vigors described† the pale interior form, which accordingly must stand as *C. squamata*, the Texas bird being the one eligible for a new name.‡ As the two have been more or less generally confused by authors I find it necessary to rearrange their characters as follows:—

Callipepla squamata (Vigors) Gray. SCALED QUAIL.

Adult ♂ (No. 5870—collector's No. 183—near Tombstone, Arizona, April 9, 1881. F. Stephens). Head with a broad, convex, but not conspicuous crest of lengthened feathers. Above faded ashy-brown with a faint bluish cast on the nape and tail; beneath brownish-white, nearly uniform, but with a trace of ashy on the breast; entire head, including the throat, cheeks, forehead, crown and occiput (but not the crest), nearly uniform pale brownish-drab, without markings; feathers of nape, back anteriorly, and the breast, narrowly but sharply margined with black, giving the effect of imbricated scales, the feathers of the breast having in addition a concealed, obtusely-V-shaped marking of brown; feathers of the abdomen with transverse, sub-terminal, irregular bars of rusty-brown: those of the crissum with shaft streaks of rusty; tips of long feathers of the crest, inner edges of tertials, and shaft-streaks on feathers of the flanks, yellowish-white; no rusty patch on the abdomen.

* This Bulletin, Vol. VI, p. 72.

† "ORTYX SQUAMATUS. Corpore plumbescenti-cano, interscapulio pectoreque dilutionibus, horum plumis circulo gracili brunneo ad apicem cinctis; cristæ occipitalis apice, gullâ, abdomine medio, crisso, striisque abdominis laterum rufescenti-albis.

MAGNITUDO *Ortygis californiani*.

HABITAT IN MEXICO. IN MUSÆO SOC. ZOOL."—Zool. Journal, V, 275.

‡ In addition to the names *Ortyx squamatus* and *Callipepla squamata*, the synonymy of the species includes only two titles; viz. *Callipepla stenua*, Wagler, Isis, XXV, 1832, 278; and *Tetræo cristata*, De la Llave, Registro tremistre, I, 1832, 144. Wagler's diagnosis clearly applies to *C. squamata* proper; I have not been able to consult the other reference, but from the extracts given by Cassin (Ill., I, 1853, p. 133), especially the sentence, "It inhabits the *Mesquite* regions in Northern Mexico," I infer that De la Llave also described the same form.

Sexes similar.

Habitat. Arizona; New Mexico; east to Western Texas (El Paso). Table lands of Mexico.

***Callipepla squamata castanogastris* var. nov.** CHESTNUT-BELLIED SCALED QUAIL.

CH. SP. ♂ similis *C. squamata*, sed colore in toto magis plumbeo; capitis lateribus et vertice obscurioribus; macula ferrugineo-castanea in abdomine. ♀ dissimilis, pallidior ac sine macula castanea.

Adult ♂ (No. 6547—collector's No. 1640—Rio Grande City, Texas, November 11, 1880. M. A. Frazar). Entire upper parts, with sides of head, and a broad space across breast, deep bluish-cinereous, tinged with olive on the back, wings, and crown; throat deep buff. in marked contrast with the bluish of cheeks and breast; under tail-coverts and crissum warm brownish-cinnamon; abdomen pale brownish-orange, with a broad, elongate, central patch of dark rusty-chestnut; otherwise with the markings as in *C. squamata*.

Adult ♀ (No. 6546—collector's No. 1655—Rio Grande City, Texas, November 16, 1880. M. A. Frazar). Paler beneath than the ♂, and without any trace of the abdominal chestnut patch.

Habitat. Valley of the Lower Rio Grande in Texas; Eastern Mexico (New Leon).

The prominent differential characters of these two races may be more briefly given as follows:—

C. squamata.—General coloring pale and faded; crown and sides of head scarcely darker than throat, and rarely with any bluish tinge; no decided chestnut patch on abdomen; sexes similar.

C. squamata castanogastris.—General coloring deep and rich; crown concolor with back, and cheeks with breast,—both very much darker than throat; abdomen with a conspicuous central patch of solid rusty-chestnut; sexes dissimilar, the ♀ lacking the abdominal chestnut patch, and being much lighter colored than the ♂.

The individual and geographical variation shown by my series of eighteen specimens of *C. squamata* proper, is comparatively slight. New Mexican examples seem to be a trifle bluer than Arizona ones, and autumnal birds from both Territories are richer-colored than those taken in spring and summer; but all are very much paler than my types of *C. castanogastris*, while in none of them is there any decided chestnut patch beneath, the nearest approaches showing only a slight rusty tipping on a few of the feathers. I have not been able to examine as large a number of the Texas form, but Mr. Frazar, who has shot upwards of a hundred in the valley of the Lower Rio Grande, assures me that the adult male never lacks this conspicuous feature. The material in the National Museum, which Mr. Ridgway has kindly placed at my disposal, fully bears out the above generalizations.

The following specimens of *C. squamata* were collected by Mr. Stephens during his late trip.

6318, ♀ ad., Camp Bowie, January 10. Length, 10.60; extent, 14.80; wing, 4.53; culmen, .63.

6319, ♂ ad., same locality and date. Length, 10.60; extent, 14.90; wing, 4.57; culmen, .62.

36, ♀ ad., Cave Creek, March 12. Length, 10.20; extent, 15.20; wing, 4.80; culmen, .60.

183, ♂ ad., near Tombstone, April 9. Length, 10.30; extent, 14.40; wing, 4.50; culmen, .57.

194, ♀ ad., near Tucson, April 14. Length, 10.40; extent, 14.70; wing, 4.57; culmen, .61.

350, ♂ ad., Santa Rita Mountains, May 11. Length, 10.30; extent, 14.70; wing, 4.56; culmen, .61.

351, ♂ ad., same locality and date. Length, 10.70; extent, 15.30; wing, 4.65; culmen, .60.

352, ♂ ad., same locality and date. Length, 10.40; extent, 14.70.

422, ♂ ad., near Tucson, May 21. Length, 10.30; extent, 15.20; wing, 4.61; culmen, .59.

424, ♂ ad., same locality and date. Length, 11; extent, 15.20; wing, 4.68; culmen, .62.

532, ♂ ad., near Tucson, June 16. Length, 10.20; extent, 15; wing, 4.70; culmen, .60.

533, ♂ ad., same locality and date. Length, 10.40; extent, 15.10.

535, ♀ ad., same locality and date. Length, 10.60; extent, 15; wing, 4.58; culmen, .61. "About to lay."

536, ♂ ad., same locality and date. Length, 10.30; extent, 14.80; wing, 4.59; culmen, .60.

153. **Cyrtonyx massena** (Less.) Gould. MASSENA QUAIL.
—Although Mr. Stephens made repeated efforts to obtain specimens of this Quail, only one pair was met with during his extended wanderings. I extract the following from his notes relating to this occasion. "I was walking up a gulch at the foot of a steep peak, when a pair of Massena Partridges rose from the grass about ten feet ahead of me. The female went first, closely followed by the male, which I recognized by the black under tail-coverts. I was carrying my gun on my shoulder, and before I got ready to fire they had passed over the adjoining ridge and disappeared in a gulch beyond. Upon looking there I flushed the male, which rose within six feet of me, but missed him as he wound through the thick brush. Taking a few steps further the female flew and I managed to secure her. Their flight was very swift and each, as it rose, uttered a low whistling *weeweewee*. The locality was rocky; with thickly growing junipers and oaks, and sacaton grass beneath." The bird is known in Arizona as the "Fool Quail" or "Fool Hen."

137, ♀ ad., Chiricahua Mountains, March 31. Length, 8.40; extent, 16.70; wing, 5; tail, 2.65; culmen, .62. "Iris dark brown. Thighs muscular. Flesh white."

154. **Ardea herodias** *Linn.* GREAT BLUE HERON.—A single bird of this species was seen April 23, on the river near Tucson.

155. **Herodias alba egretta** (*Gmel.*) *Ridg.* AMERICAN EGRET.—Only one specimen, Tucson, April 23.

156. **Nyctiardea grisea nævia** (*Bodd.*) *Allen.* NIGHT HERON.—Observed on the same occasion as the preceding.

157. **Tantalus loculator** *Linn.* WOOD IBIS.—A flock was seen July 16 at Yuma, in a slough near the Colorado River.

158. **Ægialites vociferus** (*Linn.*) *Cass.* KILLDEER PLOVER.—Several were observed late in April about some ponds near Tucson.

159. **Porzana jamaicensis?** (*Gmel.*) *Baird.* LITTLE BLACK RAIL.—On April 23 a small, black Rail, which Mr. Stephens is sure belonged to this species, was flushed from the edge of a marshy pool near Tucson. I cannot learn that either *jamaicensis* or its California race *coturniculus* has been previously reported from Arizona.

160. **Fulica americana** *Gmel.* AMERICAN COOT.—Numbers of Coots were seen at Tucson in the latter part of April. They frequented a series of shallow ponds near the river.

161. **Spatula clypeata** (*Linn.*) *Boie.* SHOVELLER.—Several of these Ducks were seen April 23, in the ponds just mentioned.

162. **Querquedula discors** (*Linn.*) *Steph.* BLUE-WINGED TEAL.—A fine adult male in the collection was taken May 5, at Tucson.

163. **Querquedula cyanoptera** (*Vieill.*) *Cass.* CINNAMON TEAL.—Two or three pairs were observed near Tucson on April 23.

164. **Erismatura rubida** (*Wils.*) *Bonap.* RUDDY DUCK.—A few individuals were met with in April near Tucson. This species was not found south of Utah by Mr. Henshaw.

165. **Hydrochelidon nigra** *Linn.* BLACK TERN.—On April 17 a female in full nuptial plumage was taken at Cienega Station. In company with several others it was busily employed in catching insects that were flying over a small meadow.

MEMORANDA OF A COLLECTION OF EGGS
FROM GEORGIA.

BY H. B. BAILEY.

It was my fortune this summer to come into possession of a collection of eggs made in Georgia, between the years 1853 and 1865, by the late Dr. S. W. Wilson. The notes accompanying the same furnish the following memoranda which are of value, since few collectors have visited, or at least reported on, this locality. The collection was made chiefly on St. Simon's Island and in Wayne and McIntosh Counties. The eggs are remarkably well preserved, each set being packed carefully in a separate box labeled according to the old Smithsonian Catalogue. They are always accompanied by dates and sometimes by copious notes. The alleged nesting sites of a few of the species represented, are peculiar, and in the case of one or two, seemingly improbable. But the collection, as a whole, seems to have been so carefully identified that I give the notes as I find them leaving it to the reader to accept or reject such as he chooses. The field represented should be a profitable one for some of our present collectors to visit.

1. **Mimus polyglottus.** MOCKINGBIRD.—Nests in low trees and shrubs, near settlements; eggs four or five. A set taken April 1.

2. **Harporhynchus rufus.** BROWN THRASHER.—Nests in low bushes or in fence corners; eggs three or four. A set taken May 1.

3. **Sialia sialis.** BLUEBIRD.—Nests in hollow trees and similar places; eggs five. A set taken April 1.

4. **Polioptila cærulea.** BLUE-GRAY GNATCATCHER.—Nests either saddled on a branch of a tree or in a fork; eggs four or five. A set taken April 30.

5. **Lophophanes bicolor.** TUFTED TITMOUSE.—Nest of the hair of the hog and opossum, and the "epidermis" of pine leaves; in hollow trees. A set of five eggs, taken May 8, was in a small oak five feet from the ground.

6. **Parus carolinensis.** CAROLINA CHICKADEE.—Nest in a hollow stump, fence rail, or similar place near the ground; the bottom lined with cotton and other soft materials. A set of six eggs taken April 10.

7. **Sitta pusilla.** BROWN-HEADED NUTHATCH.—Eggs four, sometimes five. Nest in the stump of a large pine about two feet from the ground; after penetrating the bark a large cavity is completely filled with

cotton excepting a small place for the eggs. Four eggs of a set taken April 10 measure .60X.47; .54X.44; .57X.45; .55X.46.*

8. *Thryothorus ludovicianus*. CAROLINA WREN.—Nests in hollow trees, holes in banks, or in outbuildings. A set of five eggs taken April 12.

9. *Telmatodytes palustris*. LONG-BILLED MARSH WREN.—Nests in high salt-marsh grass. A set of five eggs taken May 5.

10. *Cistothorus stellaris*. SHORT-BILLED MARSH WREN.—Nests in high grass. A set of these eggs taken May 18.

11. *Protonotaria citrea*. PROTHONOTARY WARBLER.—A nest, taken May 10, was three feet from the ground in a hollow stump of a sweet gum, in Altamaha swamp; eggs four.

12. *Helminthophila bachmani*. BACHMAN'S WARBLER.—Nests in low trees; eggs four. One of a set of four taken April 30 measures .74X.60. It is unlike any other egg that I am acquainted with. The ground-color is dull white; around the large end is a wreath of dark brown covering nearly one-third of the egg; while a few obscure spots of lilac are scattered over the rest of its surface. It has no resemblance to any Warbler's egg, and especially none to any of this genus.

13. *Helminthophila pinus*. BLUE-WINGED YELLOW WARBLER.—Nests in low bushes in the pine barrens; eggs four. A set taken April 29.

14. *Parula americana*. BLUE YELLOW-BACKED WARBLER.—Nests concealed in festoons of moss on trees; eggs four. A set taken April 23.

15. *Dendroeca dominica*. YELLOW-THROATED WARBLER.—Nests constructed with great care in pensile moss; eggs five. Those of a set taken April 24 measure respectively .75 X .51; .70 X .52; .73 X .53; .76 X .53; .73 X .52. Their ground color is gray, over which are fine dots of light brown, and a few spots and blotches of dark brown and purple near the larger end.

16. *Dendroeca pinus*. PINE-CREEPING WARBLER.—Nests on the horizontal branch of a pine tree, near the top; eggs four. A set taken April 14.

17. *Oporornis formosa*. KENTUCKY WARBLER.—Nests on ground, in swampy places. A set of five taken May 12.

18. *Icteria virens*. YELLOW-BREASTED CHAT.—Nests in low bushes, in moist places; eggs four. A set taken May 18.

19. *Myiodiocetes mitratus*. HOODED WARBLER.—Nests in thick cane brakes, in swamps. A set of three eggs taken May 12.

20. *Vireosylvia olivacea*. RED-EYED VIREO.—Nest pensile in a forked branch of a low tree; eggs three, rarely four. A set found May 4.

21. *Lanivireo flavifrons*. YELLOW-THROATED VIREO.—Nests pensile in trees; eggs three or four. May 14.

22. *Vireo noveboracensis*. WHITE-EYED VIREO.—Nests pensile in low bushes. A set of four eggs found April 21.

23. *Lanius ludovicianus*. LOGGERHEAD SHRIKE.—Nests in bushes or trees. A set of six eggs taken March 23; they lay even earlier.

* Measurements of eggs are given in hundredths of an inch.

24. *Progne subis*. PURPLE MARTIN. — Nests in hollow trees, etc., near houses; eggs five. May 18.
25. *Cotile riparia*. BANK SWALLOW. — Nests excavated in river banks; eggs five. April 20.
26. *Stelgidopteryx serripennis*. ROUGH-WINGED SWALLOW. — Nests in banks; eggs four or five. April 18.
27. *Pyranga æstiva*. SUMMER REDBIRD. — Nest loosely constructed of twigs on the horizontal branch of a pine, not very high. A set of four eggs taken May 8.
28. *Ammodromus maritimus*. SEASIDE FINCH. — Nests in low bushes, or in the high marsh-grass near the sea; eggs four. May 3.
29. *Peucaea æstivalis*. BACHMAN'S FINCH. — Nests built on the ground, in pine woods, carefully concealed under a tuft of grass, small palmetto, or low bush. The females are very close sitters; they always lay four eggs and raise two broods. An egg taken from a nest June 11 measures .74X.62, and is pure white; there were also three young birds just hatched.
30. *Pipilo erythrophthalmus*.* TOWHEE. — Nests in low bushes, seldom on the ground; eggs four. May 1.
31. *Cardinalis virginianus*. CARDINAL GROSBEEK. — Nests loosely constructed, in low trees or bushes. If discovered building they always desert the nest; eggs four. May 1.
32. *Passerina ciris*. PAINTED BUNTING. — Nests in trees or low bushes, especially among briars; eggs four. May 15.
33. *Molothrus ater*. COWBIRD. — Eggs laid in nests of small birds; one with a set of Red-eyed Vireo's eggs.
34. *Agelæus phœniceus*. RED-AND-BUFF-SHOULDERED BLACKBIRD. — Nests near fresh-water ponds, in bushes, and among high grass; eggs three or four. May 18.
35. *Icterus spurius*. ORCHARD ORIOLE. — Nests pensile, in trees; eggs five. May 10.
36. *Quiscalus major*. BOAT-TAILED GRACKLE. — Nests in trees or in the tall salt-marsh grass; eggs three, seldom four. They breed during April and May.
37. *Quiscalus purpureus*. PURPLE GRACKLE. — Nests in trees, seldom in the salt marshes; eggs three or four. April 15.
38. *Corvus ossifragus*. FISH CROW. — Nests in trees near the sea; eggs four. April 20.
39. *Cyanocitta cristata*. BLUE JAY. — Nests in trees; eggs four. May 1.
40. *Tyrannus dominicensis*. GRAY KINGBIRD. — Nests on the horizontal branches of oak trees, near the top, and loosely constructed of twigs, "with little or no lining"; eggs always three. Those of a set taken June 8 measure respectively: 1.03X.75; 1.06X.75; 1.08X.75; they are salmon-colored with blotches of reddish-brown on the large end.

* [Probably this was really the white-eyed form *P. erythrophthalmus alleni*.—EDS.]

41. *Tyrannus carolinensis*. KINGBIRD.—Nests in trees; eggs four. May 18.
42. *Myiarchus crinitus*. GREAT-CRESTED FLYCATCHER.—Nests in hollow trees; eggs five. May 13, 1853.
43. *Contopus virens*. WOOD PEWEE.—Nest saddled on the horizontal branch of a pine at a considerable elevation; eggs three or four. May 7.
44. *Empidonax acadicus*. ACADIAN FLYCATCHER.—Nests in Alatomaha River Swamp, in bushes. A set of three eggs taken May 13.
45. *Trochilus colubris*. RUBY-THROATED HUMMINGBIRD.—Nests in trees. No dates given.
46. *Chætura pelasgica*. CHIMNEY SWIFT.—Nests in chimneys; eggs five. May 18.
47. *Antrostomus carolinensis*. CHUCK-WILL'S-WIDOW.—Eggs two, deposited on the ground in thick woods, during April and May. A set in collection taken May 5.
48. *Chordediles popetue*. NIGHTHAWK.—Eggs two, deposited on the ground in fields or open places. April and May. A set in collection taken April 25.
49. *Campephilus principalis*. IVORY-BILLED WOODPECKER.—Nests in holes excavated, for the most part, in living trees very high from the ground. A set of four eggs were taken April 10, in Alatomaha Swamp. They measure respectively: .36X.95; 1.34X.98; 1.25X.95; 1.29X.98; while the eggs of a set of Pileated Woodpeckers in my collection average 1.42X.90.
50. *Picus villosus*. HAIRY WOODPECKER.—Eggs five, laid in hollows excavated in trees. April 8.
51. *Picus pubescens*. DOWNY WOODPECKER.—Breeding habits same as last. A set of five eggs taken April 12.
52. *Picus querulus*. RED-CKADED WOODPECKER.—Holes excavated in high pine trees, mostly living ones; eggs four. May 18.
53. *Hylotomus pileatus*. PILEATED WOODPECKER.—Nests excavated in pine trees; eggs three or four. April 14.
54. *Centurus carolinus*. RED-BELLIED WOODPECKER.—Eggs laid in holes excavated in trees. A set of eggs taken June 3; eighteen days afterwards the parents had newly hatched young in the same nest. They breed from March until July.
55. *Melanerpes erythrocephalus*. RED-HEADED WOODPECKER.—Breeding habits similar to last; eggs five or six. June 4.
56. *Colaptes auratus*. YELLOW-SHAFTED FLICKER.—Nesting habits same as last. Set of six eggs taken June 1.
57. *Ceryle alcyon*. KINGFISHER.—Nests in holes excavated in steep banks of rivers; eggs six. May 7.
58. *Coccygus americanus*. YELLOW-BILLED CUCKOO.—Nests carelessly constructed on the horizontal branches of trees; eggs four. May 8.
59. *Coccygus erythrophthalmus*. BLACK-BILLED CUCKOO.—Breeding habits similar to last. Two eggs taken May 18.
60. *Conurus carolinensis*. CAROLINA PARAKEET.—A set of two eggs in the collection was not fully identified but undoubtedly belongs to this

species. The eggs, which were taken April 26, 1855, were deposited in a hollow tree, on the chips at bottom. One of them was sent to Mr. Ridgway who has kindly compared it with identified eggs, and who confirms the identification. The specimens measure 1.44×1.14 ; and 1.45×1.10 . They are creamy-white, and pointed at one end.

61. *Aluco flammeus americanus*. BARN OWL. — A set of eggs taken from the tower of St. Paul's church, Charleston, S. C., December 18.

62. *Scops asio*. LITTLE SCREECH OWL. — Eggs four, deposited in hollow trees or a deserted Woodpecker's hole. April 1.

63. *Bubo virginianus*. GREAT HORNED OWL. — Eggs laid in deserted nests of the Bald Eagle, Osprey, or Red-tailed Hawk, or sometimes in a hollow tree; they are never more than two in number. May 20 (evidently a second laying).

64. *Tinnunculus sparverius*. SPARROW HAWK. — Nests in deserted Woodpecker's holes. A set of four taken April 10, was in a dead pine tree; the pair afterwards reared a brood in the same nest.

65. *Pandion haliaëtus carolinensis*. FISH HAWK. — Nests in high trees, in most instances either dead or decaying ones; eggs three or four. Breeds through April and May.

66. *Ictinia subcærulea*. MISSISSIPPI KITE. — Nest in a lofty cypress tree, at the top on a horizontal branch, in Alatamaha River Swamp. June 8 the tree was felled, and the nest found to contain two eggs which were badly broken.

67. *Accipiter cooperi*. COOPER'S HAWK. — Nests in high trees; — similar to that of a Crow. May 6, set of three eggs.

68. *Buteo borealis*. RED-TAILED HAWK. — Nests in high pine trees; eggs always two. March 14.

69. *Buteo lineatus*. RED-SHOULDERED HAWK. — Nests in high trees; eggs two or three. April 26.

70. *Buteo pennsylvanicus*. BROAD-WINGED HAWK. — Nests in high trees; eggs three. April 28.

71. *Haliaëtus leucocephalus*. BALD EAGLE. — Nests on very high trees; breeds from November to April; eggs always two. A set in collection taken January 10.

72. *Cathartes aura*. TURKEY BUZZARD. — Eggs two, deposited on the ground under an inclining log, in thick places. Set taken April 7.

73. *Catharista atrata*. BLACK VULTURE. — Eggs two, deposited on the ground, or in a hollow log near the ground. A set taken March 26.

74. *Ectopistes migratoria*. WILD PIGEON. — Nests on trees. No dates given.

75. *Zenaidura carolinensis*. MOURNING DOVE. — Nests in trees, rarely on the ground; eggs two. April and May.

76. *Chamæpelia passerina*. GROUND DOVE. — Nests on the ground, very seldom on trees; eggs two. They breed from April until October.

77. *Meleagris gallopavo americana*. WILD TURKEY. — Nest in thick places in the woods, carefully concealed; eggs twelve to fifteen. April 18.

78. *Ortyx virginiana*. BOB WHITE. — Nests in the grass in woods, or old fields; eggs ten to fifteen. May 8.

79. *Ardea herodias*. GREAT BLUE HERON.—Nests near the top of very tall trees, sometimes several in the same tree; eggs three or four. March 4.

80. *Herodias alba egretta*. AMERICAN EGRET.—Nests on trees in fresh-water ponds; eggs three. April 18.

81. *Garzetta candidissima*. SNOWY HERON.—Nests in trees near water; eggs three. April 14.

82. *Hydranassa tricolor ludoviciana*. LOUISIANA HERON.—Nests in trees near water; eggs three. April 18.

83. *Florida cærulea*. LITTLE BLUE HERON.—Nests in trees; eggs three. April 15.

84. *Butorides virescens*. GREEN HERON.—Nests in trees near water; eggs 4. April 18.

85. *Nyctiardea grisea nævia*. NIGHT HERON.—Nests in trees; eggs four, sometimes five. April 14.

86. *Nyctherodius violaceus*. WHITE-CROWNED NIGHT HERON.—Nests in trees near streams of water; eggs five. May 8.

87. *Ardetta exilis*. LEAST BITTERN.—Nests in the tall grass of fresh-water ponds; eggs five. May 18.

88. *Eudocimus albus*. WHITE IBIS.—Nests in trees in Alatamaha River Swamp; eggs three. April 20.

89. *Hæmatopus palliatus*. OYSTER CATCHER.—Nests on the sand near the sea; eggs four. May 18.

90. *Oxyechus vociferus*. KILLDEER.—Eggs four, deposited in a slight depression in the ground, on elevated places. April 1.

91. *Ochthodromus wilsonius*. WILSON'S PLOVER.—Eggs three or four, deposited on the high sandy beach. April 29.

92. *Symphemia semipalmata*. WILLET.—Nests in grass near the sea; eggs four. May 1.

93. *Himantopus mexicanus*. BLACK-NECKED STILT.—Nests on the sand, near the sea or salt ponds; eggs four. May 15.

94. *Rallus elegans*. RED-BREASTED RAIL.—Nests in fresh-water marshes, near ponds; eggs eight to ten. A set taken July 18 on Butler's Island, Georgia.

95. *Rallus longirostris crepitans*. CLAPPER RAIL.—Nests in salt marshes; eggs ten to twelve. April 18.

96. *Ionornis martinica*. PURPLE GALLINULE.—Nests in rice fields and high grass, near ponds of fresh water; eggs five to eight. A set in collection taken on Butler's Island, Georgia, July 18.

97. *Gallinula galeata*. FLORIDA GALLINULE.—Nests in fresh water ponds and near the margins of rivers; eggs six to eight. May 18.

98. *Aramus pictus*. LIMPKIN.—Nests in brackish or salt ponds near the sea; eggs six or seven. June 17.

99. *Plotus anhinga*. SNAKE BIRD.—Nests on trees and bushes near fresh-water streams or ponds; eggs four. June 19.

100. *Rhynchops nigra*. BLACK SKIMMER.—Eggs three; laid on high sand near the sea. June 18.

101. *Larus atricilla*. LAUGHING GULL.—Nests on high sand near the beaches; eggs three. June 10.

102. *Sterna regia*. ROYAL TERN.—Nests on high sand; eggs three. No dates.

103. *Sterna cantiaca acuflavida*. CABOT'S TERN.—Nests on sand. No dates.

104. *Sterna antillarum*. LEAST TERN.—Eggs three, laid on the high sand near sea. June 18.

NOTES ON THE BREEDING HABITS OF MAXIMILIAN'S JAY (*GYMNOCITTA CYANOCEPHALA*) AND CLARKE'S CROW (*PICICORVUS COLUMBIANUS*).

BY B. F. GOSS.

In May, 1879, I took nine sets of the eggs of Maximilian's Jay in Colorado. Their nests were all found within from five to nine miles east and southeast of Fort Garland. This region lies along the western base of the Sangre de Christo Mountains, is broken by hills and spurs from the main range, and has an elevation of about 9000 feet. The nests were all in high, open situations, two of them well up the steep mountain sides, and none in valleys or thick timber. All were in small piñon pines from five to ten feet up, out some distance from the body of the tree, and not particularly well-concealed. They are large, coarse, and deeply hollowed structures, much alike, being made mostly of grayish shreds of some fibrous plant, or bark, which breaks up into a mass of hair-like fibres, these forming the lining, while some weeds and grass are worked into the general fabric. I did not measure any of them before removal, and afterwards accurate measurement could not be made, as, being loosely constructed, they spread and flattened. They must have been about as deep as wide, deep enough to receive the whole body of the bird, only part of the head and tail showing above the edge. The birds are close sitters, several not leaving till the nest was shaken, and I could have caught some of them with my hand. On being driven from the nest, they would alight on an adjoining limb, and, with

lowered head and half-extended wings, utter their peculiar querulous cry. One nest contained five eggs, six contained four each, and two three each; both sets of three were partly incubated. Two nests were taken May 5, five on the 10th, and two on the 11th, 1879. The eggs are quite pointed at the small end. The ground color is bluish white, splashed all over with small spots of dark brown, thickest at the large end. Thirteen eggs measure respectively: $1.19 \times .88$; $1.21 \times .93$; $1.22 \times .92$; $1.25 \times .91$; $1.17 \times .87$; $1.18 \times .84$; $1.17 \times .85$; $1.20 \times .82$; $1.17 \times .80$; average, $1.19 \times .87$.

My friend, Mr. H. B. Bailey, has kindly sent me notes of a set of four, taken for him in New Mexico, June 5, 1882. He says: "My nest was in a piñon tree, ten feet from the ground. The inside is composed wholly of grayish shreds of some vine similar to grape-vine. The eggs are almost fac-similes of yours, but have a slightly lighter ground color. [His reference is to a set received from me.] They were hard sat on." His eggs measure $1.20 \times .86$; $1.19 \times .87$; $1.25 \times .93$; $1.15 \times .87$; average, $1.20 \times .88$.

The nest is easily seen, and I am surprised that so few have been found. The bird is a restless wanderer, choosing the most unfrequented places. It often changes its haunts, and may be plenty one year where it is scarcely found in another. Probably the food supply has something to do with its movements. It is gregarious, and partly so even in the breeding season. It is locally, and very appropriately, called the "Piñon Bird," for its home is in the piñon pines, and it is rarely seen far from them.

Clarke's Crow is a common resident of the region described, but has a higher range than Maximilian's Jay. I found it most abundant in the mountain valleys, above the foot hills. In that dry climate the trees on the sunny exposure of the valleys are dwarfed, scattering, and interspersed with thick bunches of bushes, while the opposite side, looking northward, is covered with a heavy growth of timber. It was in and around such timber that I found these birds, and there I looked diligently for their nests. Many times they showed great concern and watched me closely, peering down and scolding from the thick foliage overhead. I thought their nest must be near, and searched everywhere in the neighborhood, even climbing to the tops of high trees; but I have no doubt now that their nests were across the

valley, half a mile away. I spent more than two weeks in this fruitless search, returning every night to camp, tired and disappointed. Any one who has tramped over mountains, in the light air of 9000 feet elevation, will understand how exhausting such labor is; but I particularly wished to get the eggs of this bird, was sure they were nesting in the neighborhood, and did not like to give it up. One evening, after a particularly hard day's work, as I sat by my camp-fire, looking up the valley, one of these birds left the high timber and flew across to the other side. Its direct and silent flight suggested that it might be going to its nest, and that I had been looking in the wrong locality. Accordingly, with renewed hope, I started early next morning to the hill where I had seen it go. After climbing over the rocks and through the bushes for some time I sat down to rest, when I noticed something on a tree about thirty feet away that looked more like a squirrel's nest than anything else. On closer inspection, however, I saw that it was a bird's nest, and climbing up a short distance, was delighted to find a Clarke's Crow sitting on its nest. She sat very close, only leaving when touched by my hand. The nest was built near the end of a horizontal limb, about ten feet from the ground, in an open, conspicuous situation. It was bulky, coarsely constructed, and very deeply hollowed, the bird when on it showing only part of her bill and tail, pointing almost directly upward. She was soon joined by her mate, when, after hopping about in a listless manner for a few minutes, both disappeared. They were silent when near their nest, but noisy enough elsewhere. On further search I found several old nests and one new one, apparently abandoned. All were similar in construction and situation to the one described, and evidently belonged to the same species. The nest with young was found May 21. From finding these nests, and from other observations made, I am satisfied that Clarke's Crow breeds in open, warm situations, preferring steep hillsides; had I known this earlier I believe that I should have found more of their nests.

IMMATURITY VS. INDIVIDUAL VARIATION.

BY NATHAN CLIFFORD BROWN.

Many readers of the Bulletin are doubtless familiar with a phase of plumage of *Zonotrichia albicollis*, occurring in spring, which appears to be the normal dress of this species in immaturity, indicating, therefore, that its representatives do not attain their finest livery until the second year of their existence. In this plumage the bird appears as follows: The back, wings, and tail are essentially as in most adult specimens. There are black maxillary stripes. The breast is dull gray, lacking the bluish cast seen in high plumage; it is distinctly streaked. The throat is grayish-white or rather clear gray, either slightly or not at all contrasted with the breast. The yellow before the eye is very limited in extent and of a dull, greenish tint. The superciliary and median coronal stripes are gray mixed with brownish and dusky. Brown rather predominates in the other markings of the head. In the middle of the breast is a dusky spot, much as in *Spizella monticola*.

Feeling that all the distinctive features of this attire indicated immaturity, I was surprised, in October of the present year (1882), to procure specimens of *Z. albicollis* unquestionably in their first year, as proved by careful dissection, clad in a dress practically identical with that of maturest spring birds. The circumstance naturally suggests the existence of two geographical races of this species, but the true explanation appears to be offered by evidence which I have recently accumulated in two precisely analogous cases,—those of *Loxia americana* and *L. leucoptera*.

The announcement that males of the two North American species of *Loxia* sometimes — nay often — assume their full reddish dress in the autumn of their first year, will excite the surprise and perhaps the incredulity of ornithologists; yet, unless osteological data which I have always considered infallible are to go for nothing, they certainly do so, and the greenish and yellowish examples, commonly called immature, simply illustrate remarkable and extreme individual variation.

On November 9, 1882, I found both species of Crossbills unusually numerous in Scarborough, Maine. Wishing to obtain a good autumnal series, I used my gun freely among them and procured specimens illustrating almost every known phase of plumage except that of nestlings. Of males there are highly-colored red birds, yellowish birds, greenish birds, and birds in a garb of mixed colors. In the case of some of them traces of the first plumage unmistakably indicate immaturity,* and these birds agree exactly with all of the others in an osteological condition which stamps the entire lot as young of the year. The vertex of the skull is incompletely ossified; it is easily indented by the edge of my thumb nail; and it is *perfectly transparent*, the texture of the brain and its blood vessels being plainly discernible underneath. According to my experience, resulting from dissection of nearly four thousand specimens of North American birds, this is a condition which cannot exist in any Passerine species after maturity.

But for a severe attack of illness which, almost immediately after the capture of the birds above mentioned, put a stop to my investigations for the season, I should have had more elaborate evidence to offer as the result of systematic dissection. As it is, however, the decapitated bodies of my two rosiest examples of *Loxia leucoptera* passed under the knife of Mr. J. Amory Jeffries, of Boston. First stating that from this incomplete material no positive deduction can be made, Mr. Jeffries gives his opinion of the comparative maturity of the specimens as follows:

“The fasciæ joining the borders of the iliac bones to the vertebræ seem to be less dense and broad than in most adult Finches. The syrinx appears to be rather small for a Sparrow (though not knowing the species I cannot be positive), which points to youth. Certain divisions and relations of the muscles point to the same conclusion. The same is true of the flexible tendons of the extensor muscles of the back. The condition of the testes and vasa deferentia—both specimens being males—points to a young bird. On the other hand, I can find nothing indicative of extreme age or that is diagnostic of adult life. Finally, the birds would seem to me to have been hatched in the spring and shot in the fall.”

* There are such specimens of *L. leucoptera* in the reddish phase.

It can hardly be doubted that many similar examples of extreme individual variation remain to be detected. Among the Terns two cases almost exactly parallel with those I have mentioned have already been brought to light by Mr. William Brewster,* though in these instances the author's arguments were based wholly upon the evidence offered by plumage, and, as a result, a generally accepted species was reduced to the rank of a synonym. A state of things no less remarkable is now familiar to ornithologists in the frequent melanism, partial or entire, seen in several species of Hawks; in the pure dichromatism of certain Owls and Herons; and in the irregularity with which the waxy appendages are assumed in the genus *Ampelis*.

NEST AND EGGS OF LECONTE'S THRASHER (*HARPORHYNCHUS REDIVIVUS LECONTII*).

BY G. HOLTERHOFF, JR.

In an article published in the "American Naturalist" for March, 1881, I gave a short description of the nest and eggs of Le Conte's Thrasher. As I believe these to be the first eggs known of this rare Thrasher, and as yet unique, I will endeavor to give a more complete and exact description of the set. The "find" was made near a small station on the Southern Pacific Railroad, called Flowing Wells. This is in the heart of the Colorado Desert, about seventy-five miles north of Fort Yuma. The country thereabout is a barren, sandy desert, broken by an occasional dry arroyo or river bed, scarce worthy of the name, as they are only rivers when bearing off the deluge from some fortuitous cloud-burst. Scattered sparingly along the course of these fickle streams is a stunted growth of mesquite and palo-verde trees, the commonest and most typical forms of desert vegetation. It was while wandering up one of these arroyos, wearied and almost parched by the fierce heat, that I caught sight of a dusky-gray bird flitting from bush to bush, always in short, jerky flights, and close to the ground. Expectation cheered my footsteps. The bird, alighting

*Some Additional Light on the so-called *Sterna Portlandica*, Ridgway. Ann. Lyc. Nat. Hist., N. Y., Vol. XI, pp. 201-207.

at the foot of a bush, would disappear for a time within its branches, then emerging suddenly near the top, pause for an instant as if to see if the coast was clear, and then resume its short ungraceful flight. Being about the only bird seen for some little time, I sat down in the shade of a mesquite to watch its course and movements. After a series of short progressions it disappeared in a thick palo-verde tree and there remained so long that I became suspicious, and, cautiously approaching, had the satisfaction of seeing it at home. I paused, breathlessly, but not before the shy denizen had seen my approach, and, silently dropping from her abode, had flown into a neighboring bush. I eagerly examined the nest, found it contained two eggs, and then withdrew to my former concealment to await the owner's reappearance. This was not immediate, for it seemed shy of returning, and when at last it did so, it was by a round-about course as if wishing to divert attention from the nest. Alighting again in the palo-verde, it paused for an instant on a lower branch, and that instant sufficed to end its earthly career. Securing my prizes, I loitered around the neighborhood for some time, hoping in vain to see the mate; but if present it skulked so closely within the thickets as to evade detection.

The nest, situated about five feet from the ground, was a very bulky affair, set so loosely and carelessly amid the branches that a considerable foundation had been thrown together before the structure was firm enough to bear the nest proper. This was composed of the thorny sticks and twigs of mesquite, loosely intercrossed, and the interior rather neatly lined with reddish fibres and rootlets. The external dimensions were about nine inches in depth and six inches in width at the top; interior, depth three inches and width about four inches. The cavity was deep enough to conceal the sitting bird, except as to its projecting tail. The two eggs were fresh and presumably an incomplete clutch. They are of a light pea-green color, sparsely marked with fine reddish specks, most thickly at the larger end. In shape they are elongate and tapering, more so than those of allied species, and they come nearer to those of *H. curvirostris* than any other species as yet compared. They measure respectively 1.17 by 0.78 inches and 1.13 by 0.77 inches. This bird was the only one of the species met with, and no other nests, old or new, were seen in this locality or elsewhere in the Desert.

Recent Literature.

THE TRANSACTIONS OF THE LINNÆAN SOCIETY.*—For some time past it has been rumored that the Linnæan Society of New York contemplated publishing "Transactions," and more recently these reports have received substantial confirmation by the appearance, in advance, of extras of papers by Dr. Merriam and Mr. Bicknell; closely following these comes the volume of which they form a part. It is large octavo of one hundred and sixty-eight pages, illustrated with a frontispiece—a portrait of Linnæus from an old engraving in the possession of Mr. L. S. Foster, by whom it is contributed.

From the introductory announcement we transcribe the following explanation of the origin and future aims of the Linnæan Society:

"The Linnæan Society of New York was founded March 7, 1878, by the following-named gentlemen:—H. B. Bailey, John Burroughs, Ernest Ingersoll, Franklin Benner, Harold Herrick, Newbold T. Lawrence, William C. Osborn, Eugene P. Bicknell, Dr. Frederick H. Hoadley, C. Hart Merriam."

"Abstracts of the proceedings of the Society, and papers read before it, have appeared in different scientific serials, but much valuable matter has been withheld from lack of a direct medium of publication. The necessity for such an organ has now become manifest, and the present volume is designed to be the first of a series in which papers coming before the Society may be permanently preserved."

The Officers for 1882-83 are: Eugene P. Bicknell, *President*; H. B. Bailey, *Vice-President*; L. S. Foster, *Recording Secretary*; Newbold T. Lawrence, *Corresponding Secretary and Treasurer*; Eugene P. Bicknell, Dr. C. Hart Merriam, and Newbold T. Lawrence, *Committee on Publication*.

The above array of names is a guaranty that anything published by the Linnæan Society will possess a high order of excellence. A glance through the pages of these "Transactions" is enough to show that this assumption is well founded. There are three papers: the first, by Dr. Merriam, on "The Vertebrates of the Adirondack Region, Northeastern New York"; the second, by Mr. William Dutcher, discussing the question, "Is not the Fish Crow (*Corvus ossifragus* Wilson) a winter as well as a summer resident at the northern limit of its range"; the third, by Mr. Bicknell, devoted to "A Review of the Summer Birds of a part of the Catskill Mountains, with prefatory remarks on the faunal and floral features of the region."

*Transactions of the Linnæan Society of New York. Volume I. Published by the Society, December, 1882. New York: Press of L. S. Foster, 35 Pine Street. MDCCC-LXXXII.

The present instalment of Dr. Merriam's paper does not extend to birds; hence it would hardly come within our legitimate field of criticism were it not that its introductory portion has a direct bearing on everything that is to follow. Chapter 1 is divided into seven sections, under which the location and boundaries, geological history, topography, climate, general features, botany, and faunal position of the region are fully and very ably treated.

"The Adirondacks proper, or the area to which the subject-matter of this paper is restricted, can be stated, with sufficient exactness, to lie between parallels $43^{\circ} 15'$ and $44^{\circ} 45'$ north latitude, hence measuring about an hundred and twenty miles (193.121 metres) in a north and south direction. The transverse diameter of the region is approximately of equal extent." "From a geological standpoint the Adirondacks are interesting as constituting one of the few islands that rose above the level of the mighty Continental sea previous to Paleozoic time." Their topography "is diversified, and in some respects peculiar. The mountains and short ranges of high hills have no regular trend, and conform to no definite axis. They are in no sense a chain of mountains, . . . but, on the contrary, consist of more or less irregular groups, isolated peaks, short ranges, and 'hog-backs,' scattered over the entire area—the highest to the eastward. . . . Nearly thirty peaks exceed four thousand feet (1,219.20 metres) in height, several are about five thousand (1,524 metres), and one, Mt. Marcy, attains an altitude of five thousand three hundred and forty-four feet (1,628.851 metres)."

The section relating to general features is especially full and interesting. The mountain tops, valleys, burnt tracts, beaver meadows, lake shores, and forest depths are treated in turn, and with a touch that shows the author's familiarity with the scenes of which he writes. The following seems to us one of the best of his descriptive passages:—

"Here is a sparkling trout stream, perhaps the outlet of a mountain lake; let us follow its winding course through yonder thicket of alders. Working our way through the tangled bushes we soon emerge into the open grassy bottom of one of the most beautiful and interesting of nature's many adornments—a Beaver meadow. Here, less than a century ago, might have been heard the splash and seen the hut of the sagacious Beaver. But, like the Moose that once roamed these mighty forests, they have, excepting a few isolated individuals, been exterminated or driven beyond our borders, till now these green meadows, with occasionally the buried ruin of an ancient dam, are about all that remain to remind us of the former existence here of one of the most curious, interesting, and typical of North American mammals.

"The dam has long since disappeared, and as it gave way the pond again became a narrow stream, spreading its way through the broad muddy bottom, now verdant with marsh grasses that spring from a thick bed of elastic *Sphagnum*. Upon this moist level now stand scattered clumps of feathery tamaracks; and here and there over the uniform light green of the meadow rise, in marked contrast, the odd-looking Blue

Gentians and the bright scarlet Cardinal Flowers. These are favorite haunts of the Canada Jay and, in the autumn, of immense flocks of Robins that come to feed upon the handsome berries of the mountain ash trees that always skirt the open places, easing the stiff edge of the bordering forest."

The section devoted to botany is occupied chiefly by nominal lists of the common forest trees, undershrubs, and smaller flowering plants of the Adirondacks. For the shrubs and smaller plants the scientific names alone are given, and these, printed as "solid matter," fill the greater part of two pages with italics,—a most unfortunate arrangement from a typographical point of view.

In the seventh section Mr. Merriam considers the faunal position of the Adirondacks and concludes that the region pertains to the Canadian Fauna. In support of this conclusion he cites the presence of such "eminently northern" mammals as the Lynx, Fisher Marten, Hudsonian Flying Squirrel, Jumping Mouse, Long-eared Wood Mouse, Porcupine, and Northern Hare; and among birds, the breeding of the "Hermit Thrush, Swainson's Thrush, Red-bellied Nuthatch, Winter Wren; Tennessee, Yellow-rumped, Blackburnian, Black and Yellow, Mourning, and Canada Flycatching Warblers; White-winged and Red Crossbills, White-throated Sparrow, Junco, Rusty Blackbird, Raven, Canada Jay, Olive-sided Flycatcher, Black-backed and Banded-backed Three-toed Woodpeckers, Spruce Grouse, Goshawk, and Golden-eyed Duck." From these lists, however, we should strike out the Jumping Mouse, Long-eared Wood Mouse, Northern Hare, Hermit Thrush, and Olive-sided Flycatcher, all of which occur too numerous in the Alleghanian Fauna to be regarded as typical Canadian forms.

There is a list, also, "of 'Subarctic' species of Lepidoptera collected in the immediate vicinity of Beaver Lake," and a provisional list of plants which the author regards as "fairly characteristic of a Canadian Flora."

Chapter II occupies eighty pages and carries the subject through Carnivora in Mammalia. As a contribution to our knowledge of the habits, food, times and manner of breeding, etc., of many of the northern mammals this paper is an important one, for the life-history of each species is given in the fullest manner, and usually from data supplied by the author's experience or that of equally careful observers among his acquaintances and friends.

Original matter of this kind has an interest and value immeasurably above that of the most able compilation, and it is doubly attractive when, as in the present case, it is presented in simple, concise, and hence forcible English. Not that our author's style is above criticism; on the contrary his sentences are sometimes loosely constructed, and he too frequently makes use of expressions which, to say the least, are undignified and in bad taste. He shows a tendency, also, to over-positiveness, especially in the discussion of questions about which there may still be room for a fair difference of opinion. These faults, however, are neither serious nor irremediable, and they are not likely to weigh heavily against

the clearness, piquancy and genuine sentiment that pervade his writing. On the whole the present chapter promises to be the most interesting and important contribution of its kind that we have had since Audubon and Bachman.

Mr. Bicknell's "Review" is based on observations made "during brief explorations of the more southern Catskills in three successive years: from June 6-15, 1880; 12-18, 1881; 24-27, 1882." On the latter occasion the writer was accompanied by Dr. A. K. Fisher of Sing Sing, N. Y. "Mr. R. F. Pearsall, of Brooklyn, also visited the same section of the region from May 30 to June 13, 1882. . . . and has kindly permitted me the use of his notes."

Twenty-five of the total fifty-six pages are devoted to prefatory remarks on the faunal and floral features and affinities of the Catskills. This introductory chapter is arranged on the same general plan as that of Dr. Merriam's paper and the subject is not less fully discussed. Mr. Bicknell evidently has a penchant for the analysis and comparison of faunæ, and his remarks in the present connection are decidedly interesting. He finds that the Catskill Mountain Region at large includes three distinct Faunæ,—the Carolinian, Alleghanian and Canadian. The Alleghanian prevails, and over the greater part of the less elevated country is nearly or quite pure, but in the lowlands along the Hudson it is perceptibly modified by the presence of certain Carolinian forms which extend up from the lower part of the valley of that river. In the higher valleys, and along the slopes of some of the mountains, the Alleghanian Fauna meets and mingles with the Canadian. The resulting association of species is decidedly curious: thus Mr. Bicknell has found such birds as the Winter Wren, the Slate-colored Snowbird, and the Black-throated Blue, Black-and-Yellow, Mourning, and Canadian Flycatching Warblers, actually occupying the same ground with Wood Thrushes, Chewinks, Field Sparrows, and even Large-billed Water Thrushes. The fauna of the higher summits and slopes is purely Canadian, although several of the most characteristic, non-migratory Canadian birds are wanting. Their absence, the author thinks, is due to the isolated position and limited extent of the region.

The list proper includes eighty-nine species and varieties. It is very fully annotated, a page or more being often devoted to a single species. A novel, typographical feature is the presence of an apostrophe between varietal and generic scientific names when the specific name is omitted. There can be no objection to the practice of occasionally shortening a trinomial to a binomial when it must be often repeated in the text, but the use of the apostrophe in such a connection is arbitrary and whimsical.

We have another criticism: *viz.* that, Mr. Bicknell's style would be improved were he to condense and simplify his sentences, which are frequently involved, and sometimes positively obscure. His choice of words, too, is often unfortunate; — in short, he has yet to learn that the simplest English is the strongest and best

Mr. Dutcher's paper is short, occupying less than three pages. The author argues that the Fish Crow is "a *permanent winter* resident in its northern habitat [*i. e.* the Lower Valley of the Hudson River, Long Island, the coast line of Connecticut, etc.), instead of a *rare summer visitor*" as has been generally supposed. The evidence cited is apparently conclusive, but its bearing would be more fairly stated if the word "*winter*" had been omitted from the sentence quoted above.

In general appearance the present volume offers little that can be criticized. The paper is good and the typographical execution nearly faultless. We do not like the use of capitals for proper specific names in the scientific titles, but that is a point on which naturalists are not agreed, the botanists refusing to accept the uniform rule followed by most zoölogists. The seemingly capricious use of capitals for the English names, especially noticeable in Dr. Merriam's paper, is less defensible, and we are at a loss to understand the total absence of an index, the volume otherwise being apparently complete.

But these are trifling matters and, as a whole, Volume I of the "Transactions of the Linnæan Society" is a credit to its originators and publishers. May the series which is to follow be a *very* long one. — W. B.

SAUNDERS'S NOTES ON SOME LARIDÆ FROM PERU AND CHILI.* — The present paper treats of a collection of *Laridæ* made on the coasts of Peru and Chili by Capt. A. H. Markham of H. M. S. "Triumph." Fifteen species are represented; among these is a specimen (the third one known) of *Xema furcatum*, the large southern congener of the circumpolar *X. sabinii*. The text is accompanied by a beautiful colored plate, illustrating the adult and young plumages of this "rarest of Gulls, and one of the rarest of all known birds," now rediscovered after an interval of forty years' fruitless search.

Mr. Saunders is one of the few scientific writers who possess the happy faculty of making a technical treatise interesting to the average reader. The present paper is not inferior to his previous ones in this respect; moreover it has a direct value to the student of North American ornithology, for much of its subject-matter—especially the concluding remarks on the coloration, changes of plumage, distribution, and probable ancestral origin of the Gulls of the Pacific Ocean—relates to species which are included in the North American Fauna. — W. B.

HOFFMAN'S LIST OF BIRDS OBSERVED AT FORT BERTHOLD, D. T.† — In a paper of about nine pages Dr. Hoffman gives the result of some

* On some Laridæ from the coasts of Peru and Chili, collected by Capt. Albert H. Markham, R. N., with Remarks on the Geographical Distribution of the Group in the Pacific. By Howard Saunders, F. L. S., F. Z. S. Proc. Zool. Soc. of London, June 6, 1882, pp. 520-530; with colored plate of *Xema furcatum* adult and young.

† List of Birds observed at Ft. Berthold, D. T., during the month of September, 1881. By W. J. Hoffman, M. D. Proc. Boston Soc. Nat. Hist., Feb. 1, 1882.

observations made during September, 1881, at Fort Berthold, Dakota Territory. Fifty-seven species were identified, a fair number considering the season and the limited time spent in the field. The annotations are usually very brief, one of the longest being that relating to the Bald Eagle, from which we quote the following: "During the last week of September 'Eagle Hunters' of the Hidatsa and Arikaras [Indians] started out for the purpose of catching these birds for their tail feathers, which are highly prized for head ornaments and war bonnets. The price paid for very ordinary feathers was seventy-five cents, while good ones brought a dollar and frequently a dollar and fifty cents apiece. The method adopted in catching eagles is as follows: after selecting one of the most elevated points of land, a hole is dug large enough to allow the watcher sufficient room to turn around in. Branches, leaves, and grass, are then laid across the opening so as to give everything the appearance of the surrounding country. A live rabbit or domestic fowl is then secured by a thong and placed over the top of the artificial surface in which openings are left for the hidden observer. Should an eagle alight to secure the quarry, he is immediately caught by the legs and tied. Often the captives are taken to camp to be plucked after which they are again set at liberty."

A novel feature of the list is that of the Indian names which are given for many of the common birds. With the exception of occasional bad spelling of scientific names the paper is well printed. — W. B.

CANADIAN BIRDS. — The report of the Ornithological and Oölogical Branch of the Ottawa Field Naturalists' Club for 1881, published in the "Transactions" of that Club, No. 3, pp. 26-34, consists of a general commentary on the bird-fauna, signed by Geo. R. White and W. L. Scott, and an Appendix, forming a "List of the Birds found in the vicinity of Ottawa City, specimens of which have been shot within the last few years." The list is briefly annotated, and contains 169 species of 120 genera and 39 families — among them *Podiceps occidentalis*. This is probably correct. But we are astounded to see in the list *Harporhynchus cinereus*! *Parus rufescens*! *Vireo pusillus*! *Glaucidium passerinum* var *californicum*! This of course puts the whole affair under a cloud as an incompetent and doubtless pretty nearly worthless performance. — E. C.

CORY'S BEAUTIFUL AND CURIOUS BIRDS. — Since our last notice* of this work two parts have appeared. Part IV contains plates of *Pseudogryphus californianus*, our North American Condor; *Camptolæmus labradorius*, the Labrador Duck; and *Astrapia nigra*, the Incomparable Bird of Paradise. Part V has illustrations of *Epimachus magnus*,† the Magnificent Bird of Paradise, *Epimachus ellioti*, Elliot's Bird of Paradise, and *Pluvianus ægyptius*, the interesting Crocodile Bird of the Nile.

* This Bulletin, Vol. VI, p. 240. For earlier notices see Vol. V, p. 236; Vol. VI, pp. 111, 112.

† The above name is appended to the plate but *Epimachus speciosus* is used at the head of the accompanying text, *Epimachus magnus* being placed in the list of synonyms.

These recent issues fully maintain the high order of excellence to which we have already called attention. We trust that the work is receiving a generous patronage. — W. B.

A CHECKING-LIST OF NORTH AMERICAN BIRDS. — We have received proofs of the Checking-list advertised by Messrs. Southwick and Jencks in the present number of this Bulletin. It is essentially a reprint of the numbers and English names used in Mr. Ridgway's late Nomenclature of North American Birds, with the addition of species and varieties since described or found within our limits. Everyone who has made extensive exchanges knows what a task it is to write out the necessary lists of duplicates and desiderata, while the alternative of using a list of numbers corresponding with those of one of the standard check-lists, is, if anything, worse. The present list is designed to remedy both evils. It is to be printed in small type and will occupy only two sheets of thin paper. We are sorry to see that the scientific names have been omitted, but this, doubtless, was unavoidable in the preparation of a sheet that is to be sold for two cents, nor is their absence likely to be regretted by the class of persons for whom the list is presumably intended. — W. B.

SHUFELDT'S CONTRIBUTIONS TO THE ANATOMY OF BIRDS.* — This paper reaches us too late for anything but the briefest notice. It includes chapters on the osteology of *Speotyto cunicularia hypogæa*, *Eremophila alpestris*, the North American *Tetraonidæ*, and the *Cathartidæ*. These subjects have been already treated by Dr. Shufeldt in previous papers, upon which the present work is evidently based; but its subject-matter has been largely, if not entirely rewritten, and some unfortunate errors contained in earlier issues corrected. The text is illustrated by numerous wood-cuts, some of which are apparently new, while others will be recognized by those who are at all familiar with the "History of North American Birds." The presence of these figures in a work on osteology seems to us about as appropriate as would be that of illustrations of the characteristic scenes frequented by the birds under discussion. Such a stricture, however, will not apply to the full-page lithographs by Sinclair & Son, for these acceptably present the crania and other osteological characteristics of the species treated. The paper on the *Cathartidæ* with its accompanying plates, is entirely new matter. — W. B.

* Contributions to the Anatomy of Birds. By R. W. Shufeldt, M. D., Captain, Medical Department, U. S. A., member of the Philosophical, Anthropological, and Biological Societies of Washington, Honorary Curator of the Section of Avian Osteology of the Smithsonian Institution. Twelfth Ann. Rep. U. S. Geol. and Geog. Surv., F. V. Hayden, U. S. Geologist-in-charge. 1882, pp. 593-806. Plates I to XXIV. Cuts in text.

General Notes.

BENDIRE'S THRASHER (*Harporhynchus bendirii*) IN COLORADO.—On May 8, 1882, while collecting near Colorado Springs with Mr. J. A. Allen, I made a most unexpected capture. The morning was a stormy one and thousands of migrants, driven in from the plains, had sought refuge among the foot-hills. So great was the "rush" of birds that at times we were fairly bewildered, scarce knowing what to select from the swarms that filled every thicket and sheltered hollow. At the height of the excitement a shy, pale-colored bird, which Mr. Allen had been pursuing along a steep hillside, alighted near me, just showing the top of its head above a large boulder. Without having the faintest idea what it was, I fired, and going to the spot picked up a Bendire's Thrasher. My surprise and pleasure can be best understood by those who have had similar experiences.

The specimen, which is in perfect spring plumage, proved to be a female. It is, so far as I know, the only one that has ever been taken north of Arizona. From its limited distribution in that territory and the peculiar character of the country which it normally inhabits, there is every reason to assume that the present occurrence is a purely fortuitous one.—WILLIAM BREWSTER, *Cambridge, Mass.*

THE WATER THRUSH IN CONFINEMENT.—During the early part of the summer of 1881, one of my juvenile attendants stopped me on my official inspection around the Garden, remarking that he had captured a half-drowned Sparrow, and asked if it should be given to the rattlesnakes. On examination, to my surprise, it proved to be a Water Thrush (*Siurus naevius*), with its plumage so water-soaked that it was unable to fly. I had it placed in one of the aviaries in company with several specimens of *Turdus mustelinus*, *T. fuscescens*, *Mimus carolinensis*, *Harporhynchus rufus*, etc., where it soon recovered and could be seen daily, busily engaged in capturing the insects attracted by the prepared food placed in the aviary. As the cold weather approached and its insect food failed, it changed its diet to the prepared food, and is still alive, in fine plumage, having safely passed through two moults.—FRANK J. THOMPSON, *Zoölogical Garden, Cincinnati, Ohio.*

AN INTERESTING FLIGHT OF PINE FINCHES.—A recent letter from John athan Dwight, Jr., of New York, contains the following interesting note which I have his permission to publish.

"When at Monticello (New York), early in October, I saw several small flocks of Pine Finches (*Chrysomitris pinus*). At Fort Hamilton, on October 21, their numbers were phenomenal. There were hundreds, and perhaps thousands, in flocks of from a dozen to sixty or seventy. A curious fact is that when we first saw them—about nine o'clock A. M.—every flock

was flying in a north-westerly direction, at a short distance from the shore, and all kept on without stopping as far as we could watch them. Mr. De L. Berier, who was with me, had never met with the species before. By posting ourselves in their line of flight we secured as many as we wanted. One shot brought down four and a Goldfinch (*C. tristis*), there being a few of the latter occasionally mingled with them. Later in the day we found *C. pinus* everywhere, usually feeding in corn-fields. They were equally abundant on the 22nd, but their morning flight was not repeated. The weather on the 21st was fair; on the 22nd, threatening rain. I can think of no satisfactory explanation of this mysterious migration, unless it be that the birds were intending to cross the Narrows; but if so, why did they not stop?"—WILLIAM BREWSTER, *Cambridge, Mass.*

ON LECONTE'S BUNTING (*Coturniculus lecontei*) AND OTHER BIRDS OBSERVED IN SOUTH-EASTERN ILLINOIS. — While hunting Prairie Chickens on Sugar Creek Prairie, in the southern portion of Richland Co., Illinois, October 27 and 28, 1882, I was somewhat surprised to find Leconte's Bunting there in great abundance; also Henslow's, which, however, was less numerous. The locality where the Leconte's Buntings were first observed consisted of a patch of "open" prairie 160 acres in extent, entirely overgrown with iron-weeds (*Vernonia noveboracensis*) mixed with occasional patches of prairie grasses—the only part of the prairie not under cultivation. They were found, however, almost everywhere, grassy places being mostly affected. In flushing them it was almost necessary to kick them from the grass, and it was very rarely one would start up farther in front than a dozen feet. Their flight, like that of *C. henslowi*, was very irregular, making it difficult to shoot them, but they could be easily distinguished from individuals of that species by the conspicuously lighter, more yellowish coloration. A few individuals of *Peucaea illinoensis* were also noticed in weedy places, along fences, etc., but being provided only with heavy charges of coarse shot no specimens were secured. Near a farm house a pair of Mocking-birds was observed on the date mentioned, and I was informed they nested in the orchard every season, while the species was of regular if not common occurrence in the vicinity.—ROBERT RIDGWAY, *Washington, D. C.*

NOTE ON "PASSERCULUS CABOTI."—This name only occurs in Baird, Brewer, and Ridgway's Hist. of N. A. Birds, Vol. II, plate xlv, fig. 9—there being no description or text accompanying the figure, which is taken for specimen No. 62,373, Mus. Smiths. Inst., from Nahant, Mass. The bird is in fact a young *Melospiza palustris*, in a plumage hitherto unrecognized, in which there is a decided yellow loreal spot, and a vague yellowish suffusion of the cheeks and throat. I lately received a Swamp Sparrow from S. W. Willard, of West DePere, Wisconsin, who was in doubt of the identification, as my "Key" says of the species, "no yellow anywhere." The yellow spot is quite strong—about as in *Ammodramus maritimus*, and nearly as bright as in *Zonotrichia albicollis*. On examining the type of "*Passerculus caboti*," through Mr. Ridgway's attentions, I find it to be the same thing. —ELLIOTT COUES, *Washington, D. C.*

THE CARDINAL GROSBEEK IN MASSACHUSETTS.—On November 14, 1880, Mr. J. E. Fowle took a Cardinal Grosbeak (*Cardinalis virginiana*) in this place. It was with Chickadees (*Parus atricapillus*) hopping around on low bushes. It did not have the appearance of an escaped cage bird, such as worn tail feathers, long claws, etc.—E. H. RICHARDS, *Woburn, Mass.*

CROWS FISHING. — *A propos* of some notes recently published by Mr. Chamberlain on the fish-eating propensities of the Crows of New Brunswick, Mr. Manly Hardy writes me that he has twice seen Crows fishing in the Penobscot River near Bangor. On one occasion several of them were flying about over the water occasionally dipping down like Swallows, and seizing some floating matter which he thought might be offal from vessels. At another time they were making frequent forays from a boom-pier, to which they returned after each flight. They often struck the water with sufficient force to violently agitate its surface but never actually dove.

Mr. Hardy also speaks of their eating sea-urchins and other shell-fish, a habit which, of course, has been already reported; and he has known them to devour a string of twenty good-sized trout which had been left in a spring under water, well concealed, as he supposed, by the overhanging alders. — WILLIAM BREWSTER, *Cambridge, Mass.*

THE SCISSOR-TAIL (*Milvulus forficatus*) AT NORFOLK, VIRGINIA. — In January, 1882, there was sent to the Smithsonian Institution, by Mr. R. B. Taylor, of Norfolk, Va., a fine specimen of this species which that gentleman had shot January 2 in his door-yard in that city. The specimen was sent in the flesh, and being too much decomposed to skin, is now preserved in alcohol in the U. S. National Museum (Catal. No. 85,934). — ROBERT RIDGWAY, *Washington, D. C.*

THE CALLIOPE HUMMINGBIRD AND PYGMY OWL IN MONTANA. — The past season I had the pleasure of capturing in the Belt Mountains, the two following western birds: *Stellula calliope* Gould, ♂ Gold Run, May 24, 1882; *Glaucidium gnoma* Wagl., ♂ Gold Run, April 14, 1882. They are the only individuals of the species I have ever seen, and are certainly rare in this part of the Territory. — R. S. WILLIAMS, *Gold Run, Mont.*

ON SOME REMARKABLE POINTS OF RELATIONSHIP BETWEEN THE AMERICAN KINGFISHERS. — In handling specimens of the American Kingfishers the writer has often been impressed with some very curious features of relationship which he does not remember to have seen noticed, and which, therefore, he takes this opportunity of bringing before the readers of the Bulletin.

The American Kingfishers, so far as known, comprise six species,* all belonging to the genus *Ceryle*. These six species fall into three very

*Two geographical races, which pass current for "species" are not included, these being *C. stellata*, Meyen, and *C. cabanisi*, Tschudi, the former belonging to *C. torquata*, Linn., and the latter to *C. americana*, Gm.

distinct groups, each distinguished by a particular style of coloration, and composed of two species, *one of which is an almost exact miniature of the other*. This curious, and so far as I know unparalleled, case may be illustrated by the following tabular statement:—

- GROUP I. Color above, bluish plumbeous; throat and collar round neck, white; a plumbeous pectoral band, behind which there is more or less of rufous, at least in the female.
Larger species, *C. torquata* (Linn.).
Smaller species, *C. alcyon* (Linn.).
- GROUP II. Color metallic bottle-green above, the throat and nuchal collar, white; a bottle-green pectoral band, behind which there is more or less of rufous in the female.
Larger species, *C. amazona* (Lath.).
Smaller species, *C. americana* (Gm.).
- GROUP III. Color above, metallic bottle-green, the throat and nuchal collar, orange-ochraceous; lower parts rich orange-rufous, the male with a pectoral band of white and dark-green bars.
Larger species, *C. inda* (Linn.).
Smaller species, *C. superciliosa* (Linn.).

The curious nature of the case involves several other facts which may furnish rich material for investigation to those engaged specially in the study of the origin of species and the various problems connected therewith.

In the first place, the difference between the "homochromatic" species (if such a term may be used for those resembling one another in color), decreases in regular ratio from Group I to Group III; in other words, while the difference in coloration between *C. torquata* and *C. alcyon* is very marked (so far as the lower parts are concerned), the differences of coloration between *C. inda* and *C. superciliosa* are confined to the merest details; while *C. amazona* and *C. americana* differ from one another less than do the species of Group I, but more than those of Group III.

Scarcely less curious is the circumstance that between the largest species of Group I (*C. torquata*), which for size may be compared with an Ivory-billed Woodpecker, and the smallest of Group III, which is scarcely larger than a White-bellied Nuthatch, there is a regular gradation in size, the species standing thus, in the order of their relative dimensions.

- | | | |
|-----------------------------|---|------------|
| 1. <i>C. torquata</i> , | } | GROUP I. |
| 2. <i>C. alcyon</i> , | | |
| 3. <i>C. amazona</i> , | } | GROUP II. |
| 4. <i>C. americana</i> , | | |
| 5. <i>C. inda</i> , | } | GROUP III. |
| 6. <i>C. superciliosa</i> , | | |

As another noteworthy fact, it may be stated, however, that 2 and 3 on the one hand, and 4 and 5 on the other, are more nearly equal in size than are 1 and 2, 3 and 4, or 5 and 6. — ROBERT RIDGWAY, *Washington, D. C.*

RICHARDSON'S OWL IN SOUTHERN NEW HAMPSHIRE.—On December 15, 1879, I took a female *Nyctala tengmalmi richardsoni* at Hollis, New Hampshire. It was in a small grove of white pines, and was sitting bolt upright by the side of a trunk about ten feet from the ground. It was wide awake, for it watched me closely as I stepped back in order not to mutilate it. The weather was mild at the time with about three inches of snow on the ground.—WILLIAM H. FOX, *Washington, D. C.*

THE BURROWING OWL IN FLORIDA.—Mr. Chas. W. Gunn, of Grand Rapids, Mich., writes of the abundance of this bird in certain localities in Florida. "Hearing of a small Owl living in burrows in the ground, dug by itself, in the prairies east of the Kissimmee River, I ascertained beyond doubt that it is the *Speotyto*. Mr. Parker, state representative, who lives at Fort Bassenger, tells me they are very common on the prairies north and east of the Fort, where a dozen can be shot in an hour."—ELLIOTT COUES, *Washington, D. C.*

NOTE ON THE MISSISSIPPI KITE.—Dr. J. H. Mellichamp, of Bluffton, South Carolina, sends us a specimen of *Ictinia mississippiensis*, with a letter containing interesting notes on the bird as observed in that locality. About the second week in August several of these birds were observed, usually in pairs, hovering and soaring at a considerable height over the village, from morning till night, occasionally swooping down upon their prey among the oak-trees. Their motions were very graceful as they poised and floated, with their heads bent down in eager watch for their prey, occasionally uttering their peculiar cry. A specimen having been brought down from a great height, about the first of September, the rest disappeared, and were not seen again. Upon examination the stomach was found to be crammed with "locusts" (cicadas), among which were a few "katyids." A countryman who had killed one of these Hawks at his place informed Dr. Mellichamp they were there much less shy than they were here over the village, and that his poultry did not show the fear of them which they manifested for Hawks of other species. The writer considers the birds strangers in his locality, which is on the mainland, along May River, midway between Beaufort, S. C., and Savannah, Ga.—ELLIOTT COUES, *Washington, D. C.*

OCCURRENCE OF THE SWALLOW-TAILED KITE IN MASSACHUSETTS.—Mr. Raymond L. Newcomb informs me that he has in his possession a stuffed specimen of *Elanoides forficatus*, shot near the town of West Newbury, Essex Co., Mass., on the last of September, 1882. This is believed to be the first authentic capture of the kind on record for New England.—ELLIOTT COUES, *Washington, D. C.*

THE BALDPATE IN RHODE ISLAND.—The American Widgeon or Baldpate (*Mareca americana*) has been unusually abundant in the waters of Southern Rhode Island during November, and the first week of December, 1882. About December 1 a gentleman brought in a bunch for identi-

fication, and at the same time informed me that he had just killed twenty-four.—F. T. JENCKS, *Providence, R. I.*

GEOGRAPHICAL VARIATION IN SIZE AMONG CERTAIN ANATIDÆ AND GRUIDÆ. — While much has been written on the subject of geographical variation in size among birds, I do not remember having read anything bearing upon the following apparent exception to the rule of larger size to the northward. In *Birds of the Northwest* (p. 723) Dr. Coues has called attention to "something very curious in the relationships that many birds of the families *Colymbidæ* and *Podicipidæ* bear to each other," many of the species of these two families having a "*fraterculus*" or "little brother," that is to say, a representative species differing chiefly if not only in its smaller size. In the family *Anatidæ* there are several similar cases, with this difference: That, whereas in the case of the Loons and Grebes all the *fraterculi* are of more southern range than their larger representatives, just the reverse is the case among the Geese, and also, in one instance at least, among the Cranes. As examples the following couplets may be cited:—

SOUTHERN FORM.

Olor buccinator.

Bernicla canadensis.

Bernicla occidentalis.

Fulix marila.

Grus pratensis.

And among European species —

Anser albifrons.

Olor cygnus.

NORTHERN (SMALLER) REPRESENTATIVE.

O. columbianus.

B. hutchinsi.

B. leucoparia.

F. affinis.

G. canadensis.

A. erythropus.

O. bewicki.

Some of the above-named representative forms are specifically distinct, while others are allowed only the rank of geographical races; but in either case, the interesting question arises: Why do these particular examples offer so marked an exception to the acknowledged law of increased size to the northward?

The larger average size of North American specimens of certain *Anatidæ* compared with European examples of the same, or representative, species, is another "law" of geographical variation which I do not remember to have seen noticed; yet it is a fact which has frequently come under my observation when making comparison of material from the two continents. In several instances it forms almost the only character upon which subspecific separation is based, as in the case of the White-fronted Geese (*Anser albifrons* and *A. gambeli*) and the Golden-eyes (*Clangula glauciun* and *C. americana*). The difference seems to hold good in other species also, as the Mallard (*Anas boschas*) and Pintail (*Dafila acuta*), in both of which, so far as my observation goes, American specimens are constantly larger than European.—ROBERT RIDGWAY, *Washington, D. C.*

CASPIAN TERN IN OHIO. — Mr. Frank J. Thompson, of the Zoological Garden of Cincinnati, informs me of the capture of three specimens of *Sterna caspia* in that vicinity, about Oct. 9, 1882. In company with as

many others of the same species they were found on an "ice-pond" a few miles north of the Garden. The three secured were all killed at one shot. Mr. Thompson also writes that Mr. Dury has a fourth example which was taken on the Little Miami River about Oct. 15, 1882. Such dates and locality would both appear to be exceptional. — ELLIOTT COUES, *Washington, D. C.*

POLYGAMY AMONG OSCINES. — A letter received from Prof. F. E. L. Beal, of the Iowa Agricultural College, gives some interesting data upon this subject, in the cases of *Agelaius phœniceus* and *Sialia sialis*. Having often been struck with the numerical preponderance of female Marsh Blackbirds, Professor Beal made in the spring of 1881 special examination of a small piece of swamp in which he always found one male and three to seven females. For two weeks, during which the place was carefully watched, only one other male made his appearance upon the scene, and he was at once attacked and routed by the one in charge of the premises. This past spring Professor Beal found one male and two females domiciled on a small prairie slough. Both nests were discovered, each containing four eggs, and the course of events was watched until the young were fledged — the arrangement remaining always the same.

The case of the Bluebird is given on hearsay, but seems perfectly authentic. A trio of these birds occupied two niches in the chimneys of the gas works at the college there, and raised two broods. The male paid equal attention to both females, often passing directly from one nest to the other, and was seen in congress with each of the females in the course of a few minutes. — ELLIOTT COUES, *Washington, D. C.*

THE PRESCIENT POWER IN BIRDS. — I wish to take friendly issue with Mr. Henshaw over one of the statements made in his recent article "On the Decrease of Birds." Alluding to the extermination of Purple Martins one season at Cambridge, soon after their arrival, Mr. Henshaw says * in substance that facts of this sort sufficiently refute the superstition that birds are able to foretell the weather. I do not believe that a majority of observers are with him in that opinion. Because the Martins apparently missed it on the occasion cited, does it follow that they are wholly without that "mysterious faculty" which enables them to avoid tempestuous weather, *if they wish to?* And granting that this occurrence does prove the Martins incapable of taking an anticipative view of the weather, I refuse to admit that all migratory species, or even a majority of them, are similarly lacking. My own field of experience has gradually confirmed me in the belief† that at least many of our birds are able, by a faculty which most emphatically is "mysterious," to foresee a coming storm hours before any signs of such a storm are visible to human eyes.

Let me instance a circumstance bearing upon this matter: Oct. 26,

* Bull., Vol. VI, No. 4, p. 193, foot-note.

† So eminent an authority as Mr. J. A. Allen has reached the same conclusion. See "Century Magazine," Oct., 1881, p. 938.

1873, was one of those beautiful days with which New Englanders are often blessed in autumn. The air was like crystal and scarcely a cloud appeared in the sky from dawn to dark. At my first glance out of doors, I saw that there was a great flight of Hermit Thrushes. They were in the woodbine about my window, in the roof gutter beneath it, and upon the ground, everywhere, in great numbers. Upon going out I found them actually swarming about the neighborhood. Business called me down town during the day, and in the latter part of the afternoon I found but few Thrushes in the outlying country. Next morning I awoke to find a violent rain-storm prevailing, which continued unabated until night.

Now I believe in a liberal deduction from such facts as the above and, per contra, such as Mr. Henshaw relates about the Martins. Is it not fair to accept such occurrences as indicating: (1) That many birds are forewarned of severe storms. (2) That they sometimes improve their opportunity to get out of the way. (3) That they sometimes, especially in the spring, prefer to run the risk of exposure. — NATHAN CLIFFORD BROWN, *Portland, Maine.*

MIGRATION OF BIRDS IN THE MISSISSIPPI VALLEY.—[The following circular, which has been sent us for publication, is self-explanatory, but it may be well to add that several of Mr. Cook's reports for 1882 have already appeared in recent numbers of "Forest and Stream." His undertaking deserves the cordial support of all who are in a position to render him aid.—Eds.]

Last year a number of ornithologists were induced to unite with me in conducting a series of observations on the migration of birds in the Mississippi Valley. The results were so gratifying that the intention is to undertake the same again this winter and next year. As the value of the observations is greatly increased by making the stations more numerous, it is hoped that as many as possible may join in the work. The general plan will be during the winter to note carefully the habits and food of each species, and with the first approach of spring to note the date when each of the winter visitors begins to leave for the north; when the bulk of each species passes, and when the last one is seen. Of those species that pass through to nest further north, note the arrival of the first one and of the bulk; the departure of the bulk and of the last one. Of those that remain to breed, note first arrivals; arrival of bulk; breaking up of flocks into pairs; nesting; eggs; young; and any and all other interesting items concerning habits, actions, food, etc., which may come within notice.

Any one in the Mississippi Valley who is willing to aid in the work will confer a favor by dropping me a postal card. It is not necessary that one be an expert ornithologist; all can record the movements of our common and well-known birds, a full knowledge of whose movements will serve as the best foundation for the study of the rarer species. To such as wish to help, a full statement of methods and aims will be sent.—W. W. COOKE, *Jefferson, Wisconsin.*

Fly Catchers and Water Birds.

(TO BE ISSUED SHORTLY.)

PART II.

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BULLETIN

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CONTENTS.

	PAGE.	
THE VERNAL MIGRATION OF WARBLERS ON WOLF RIVER, ONTAGAMIC COUNTY, WISCONSIN. By <i>F. L. Grundtvig</i>	65	GENERAL NOTES.—Probable breeding of the Winter Wren (<i>Anorthura troglodytes hiemalis</i>) in Eastern Massachusetts, 119; The Winter Wren (<i>Anorthura troglodytes hiemalis</i>) in Western Vermont, 120; <i>Troglodytes aedon parkmani</i> in Kansas, 120; Capture of the Great Carolina Wren (<i>Thryothorus ludovicianus</i>) in Connecticut, in March, 120; A second instance of the Wintering of the Pine Warbler in Massachusetts, 120; Development of a brood of Black-and-yellow Warblers (<i>Dendroica maculosa</i>), 121; Capture of <i>Agiothus linaria holboellii</i> in the Lower Hudson Valley, 121; Individual Variation in Color in the European Crossbill, 121; The Cow Bunting wintering in Massachusetts, 121; An unusual influx of the Three-toed Woodpeckers (<i>Picoides arcticus</i> and <i>P. americanus</i>) into Eastern Massachusetts, 122; The Barn Owl in Canada West, 122; Capture of Richardson's Owl (<i>Nyctala tengmalmi richardsoni</i>) near Providence, R. I., 122; Capture of the Great Gray Owl in Massachusetts, 123; Recent occurrence of the Flammulated Owl in Colorado, 123; Capture of the Golden Eagle at Albany, N. Y., 123; Wintering of the Sora Rail at the North, 124; Nesting Habits of the Canada Goose (<i>Bernicla canadensis</i>), 124; <i>Larus glaucescens</i> in the Bay of Fundy, 125; Occurrence of <i>Larus glaucescens</i> at Grand Menan, N. B., 125; The White-winged Gull in Maine, 125; The Roseate Tern on the Coast of Maine, 126; Winter Birds in New Brunswick, 126; Some Albinos in the Museum of the Philadelphia Academy, 126; A Letter from an Old-time Ornithologist, 127; Eggs of British Birds in Exchange for Eggs of American Birds, 128.
THE COMMON NAMES OF AMERICAN BIRDS. By <i>Ernest Ingersoll</i>	72	
DESCRIPTION OF A HYBRID SPARROW (<i>Zonotrichia albicollis</i> + <i>Junco hiemalis</i>). By <i>Charles H. Townsend</i>	78	
NOTE ON EXCEPTIONS TO THE LAW OF INCREASE IN SIZE NORTHWARD AMONG NORTH AMERICAN BIRDS. By <i>F. A. Allen</i>	80	
BIRDS OF THE LOWER URUGUAY. By <i>Walter B. Barrows</i>	82	
DESCRIPTIONS OF NEW SPECIES OF BIRDS FROM SANTO DOMINGO. By <i>Charles B. Cory</i>	94	
HOLBOLL'S RED-POLL (<i>Agiothus linaria holboellii</i>) IN NEW ENGLAND. By <i>William Brewster</i>	95	
RECENT LITERATURE.—The British Museum Catalogue of Birds, 99; Birds and Insects, 105; Economic Relations of Birds again, 107; Report on the Birds of Ohio, 110; Illustrations of the Nests and Eggs of the Birds of Ohio, 112; Brown's Birds of Portland, 112; Ridgway on the Tree-creepers, 113; Ridgway's Review of the Genus <i>Centurus</i> , 114; Lawrence on New Species of Birds, 114; Freke on North American Birds crossing the Atlantic, 114; Freke on European Birds observed in North America, 115; Canadian Birds — Errata, 115; Minor Ornithological Publications, 116.		

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THE VERNAL MIGRATION OF WARBLERS ON WOLF RIVER, ONTAGAMIC COUNTY, WISCONSIN.

BY F. L. GRUNDTVIG.

Near the village of Shiocton, the Shioc River joins the Wolf, after running parallel with it for about a mile. Between, and immediately bordering these streams, is a tract of lowland, the most of which is annually overflowed during the spring freshets, the water at times rising to a height of over nine feet above the ordinary level. This lowland appears like an oasis in a desert, covered, as it is, with a rich, vigorous growth of hardwood timber, and bordered on both sides by waste swamps extending in each direction for many miles. The timber covering this tract consists principally of soft maple intermingled with many ash, elm, oak and willow trees.

The Warblers, upon their first arrival, preferred the willows and smaller trees to the higher ones; but upon the leafing out of the maples and until the close of the season, the entire strip of hardwood timber lying between the two streams afforded them a congenial resort. After first resting in a row of old willows, the vast throngs of these birds would enter this piece of timber, at the junction of these streams, working leisurely northward until thoroughly dispersed among the higher tree-tops. Only a few went east of the Shioc, whereas many crossed the Wolf, working westward through a low growth of shrubs and bushes

growing along the banks of some ponds and old river courses. My morning and afternoon excursions commenced regularly May 3, and extended down the Shioc, up the Wolf and then westward, through the low shrubs and bushes, continually crossing and re-crossing this inner strip of land. Between May 3 and 15 my observations were the most important and exact, for after that date many Warblers, concealed by the thick foliage, must have escaped my notice. Here stormy days frequently favored me, as the Warblers, during high winds, were generally noticed in low bushes, on "wind-falls," old logs, and on the ground. At such times they would often crowd together on banks, facing the wind, possibly anxious to cross, but hardly daring to attempt it. During the first part of May the water increased rapidly in height, until I could with ease row everywhere throughout the timber, and as my presence in a boat seldom alarmed them, I was enabled to follow closely the various flocks as they passed from one tree to another on their journey northward.

Previous to April 30 *Dendræca coronata* was the only Warbler I noticed. On the 30th, however, a single *Helminthophila celata* was taken, and the next day, when the wind, after having been northerly for a long while, shifted to the west, several specimens of *Mniotilta varia* and *Dendræca palmarum* arrived. May 2 the wind changed to the south and a few *Helminthophila celata* and *Mniotilta varia* were found intermingled with some of the flocks of *Dendræca coronata*. May 3, at about sunrise, I took a single specimen of *Dendræca pinus*; possibly I overlooked it the day before. About this time a gentle rain commenced falling, which continued most of the day. Towards evening thousands of Warblers began to arrive, but owing to the rapidly increasing darkness I was only able to partially examine them. Among the new arrivals I found *Parula americana*, *Dendræca pennsylvanica*, *blackburniæ*, *maculosa*, *æstiva*, and *Setophaga ruticilla*. May 4 *Helminthophila ruficapilla*, *Dendræca virens*, and a single *Protonotaria citrea* were noticed.

On the 5th this migration seemed to be somewhat checked by a violent north wind, but by the 8th, after a whole night of rain, the wind quieted down, and the trees and bushes were once more literally alive with Warblers, so numerous, in fact, as to be apparently all united into one immense flock. *Dendræca tigrina* and *cærulescens* were the only new species observed. A cold,

northerly wind again rising, appeared to partially check this vast throng; but May 10, after another hard rain, I noticed them again moving slowly northward. The new species observed during this flight were *Myiodioctes canadensis*, *Dendræca striata*, and *Geothlypis trichas*. The wind once more shifted to the south, and on the 18th I noticed a few new flocks, among which were some *Dendræca castanea*. May 21 was the only day after the 15th when the number of flocks exceeded those previously observed. The night of the 20th was exceedingly cold, freezing hard in many places; in the morning, a very strong south wind was blowing, and Warblers in innumerable flocks began arriving. *Helminthophila peregrina*, previously seen but once (May 19), now arrived in large numbers. This immense flight soon ceased, and by May 26 only a few single Warblers were noticed.

The number of Warblers that migrated over this route was simply astounding. Some of the more uncommon eastern species appeared here in large numbers. I found at the least estimate several hundred of *Helminthophila celata*, and to say I observed several thousand of *Dendræca tigrina* would not be overstating it. This passage of the Warblers was really the most interesting of the kind I have ever witnessed. No bird migrations in Europe can be compared with it. The many pleasant hours spent in my boat, studying these graceful creatures, manifold both in species and beauty, will long be cherished among the many recollections of my sojourn in America.

The following is my annotated list of all the Warblers observed, omitting the genus *Siurus*, members of which were never noticed in company with the other species.

***Mniotilta varia* (L.) V.** May 1 two males were taken, not in flocks with other Warblers, but east of the Wolf River. Afterwards I found it usually associated with other Warblers, Kinglets or Titmice, but five were the most I ever counted in any one flock. A few remained to breed. The first female was taken May 10.

***Parula americana* (L.) Bp.** May 3 two females were taken. The next morning a few others of both sexes appeared in the other flocks, no more than three being noticed together; but in the afternoon they were quite numerous. May 5 I noticed these Warblers in small flocks by themselves, but during the next few days they were rather scarce. Between the 12th and the

17th they were again quite numerous, but the very next day none could be found. After the 18th only a few were noticed. June 23 I found a nest of this species containing eggs.

Protonotaria citrea (Gm.) Bd. May 4th I found among a flock of Warblers that were flitting about in some low bushes, a handsome male of this species, now in the collection of S. W. Willard, West De Pere, Wisc. It arrived in company with *D. coronata* and *D. Blackburniae*.

Helminthophila chrysoptera (L.) Bd. Two males of this species were taken May 15th and one on the 18th. The next two days it appeared singly in the different flocks, but the 21st both sexes arrived in quite large numbers, only exceeded by *Dendroica striata*, *H. peregrina*, and *D. maculosa*. It apparently nested in thickets in a low, wet place, but continued search failed to reveal its nest.

Helminthophila ruficapilla (Wils.) Bd. I first discovered this Warbler May 3, when five were noticed in some low shrubs. The 5th I found it intermingled with many of the other flocks, and the 6th it rather outnumbered its bush associates, but from the 6th to the 9th only a few were seen. The 10th it was quite numerous everywhere, and increased in number until the 12th, when it was only exceeded by *Setophaga ruticilla*. After this date it was rather scarce along the rivers, but still remained quite numerous in the swamps, where it apparently nested, although no traces of a nest could be discovered.

Helminthophila celata (Say) Bd. April 30 a female of this species was taken on a meadow east of Wolf River, in company with a single *D. coronata*. After May 1 I found both sexes quite common, still associating more or less with *D. coronata*. The last one was observed May 9th. Coues, in his "Key to North American Birds," describes this Warbler as "never ashy about the head," and also gives the size as being the same as that of *H. ruficapilla*. This, however, differs from my experience, as many of the specimens were *very* ashy about the head, while all of them were larger in all proportions than *H. ruficapilla*. From a large series of specimens of both species, I have carefully compiled the following measurements, giving both extremes in each case.

	Length.	Extent.	Wing.	Tail.
<i>H. celata</i> ,	5—4 $\frac{7}{8}$	7 $\frac{3}{4}$ —7 $\frac{3}{8}$	2 $\frac{1}{2}$ —2 $\frac{7}{16}$	2—1 $\frac{7}{8}$
<i>H. ruficapilla</i> ,	4 $\frac{5}{8}$ —4 $\frac{5}{16}$	7 $\frac{3}{8}$ —6 $\frac{1}{16}$	2 $\frac{1}{2}$ —2 $\frac{3}{8}$	1 $\frac{3}{4}$ —1 $\frac{5}{8}$

Helminthophila peregrina (Wils.) Cab. May 19 a single male was taken by S. W. Willard in a thicket east of Wolf River. The 21st both sexes were very numerous, ranking in numbers with *D. striata*. After this the number diminished somewhat, but the species was still quite common until the 27th, when it suddenly disappeared.

Dendroeca aestiva (Gm.) Bd. A single male was taken May 3. The 4th it was noticed intermingled with many flocks, and on the 5th it outnumbered all its associates. May 14 they were everywhere unusually abundant, exceeded in numbers only by *S. ruticilla* and *D. pennsylvanica*. They breed here abundantly. The first egg was found June 2. May 12 I shot a male that had the crown curiously striped with several rich orange-brown marks.

Dendroeca virens (Gm.) Bd. Several males were noticed May 4. After that date and until the 22nd it was occasionally seen in the other flocks, May 8 being the only day it was quite common. The 7th, 9th, and from the 13th to the 18th, none were noticed.

Dendroeca caerulescens (L.) Bd. May 8 a few males were seen; the numbers then gradually increased until the 11th, when the first females were noticed. May 12 none were observed, but after that date it was occasionally seen until the 23rd. May 31 a single male was noticed.

Dendroeca coronata (L.) Gr. The first specimen was taken April 5; single ones were also taken the 10th, 12th, 14th and 18th. April 21 the first flock arrived. From this date the number increased rapidly. April 30 other Warblers were found intermingled throughout the flocks, and by May 8 the number was quite insignificant; from the 9th to the 20th only a few single ones were observed. Undoubtedly this species was the most abundant of all the Warblers.

Dendroeca blackburniæ (Gm.) Bd. The arrival of this Warbler was indeed very singular. The first one, a male, was noticed May 3. The 4th, 5th, and 6th a few were seen, but the 7th none were to be found; the 8th, however, enough of them had arrived to far outnumber the other Warblers then present, but the very next day not one was seen. Excepting the 16th and 17th, it was noticed each day from the 9th until the 23rd, when it disappeared.

Dendroeca striata (*Forst.*) *Bd.* May 10 a few males arrived, but no others were noticed until the 18th. The 19th and 20th a few were seen; the 21st they became quite numerous, and from the 22nd to the 24th they outnumbered the other species. On the 25th, however, the numbers were exceeded by those of *D. castanea*, but the flocks continued quite numerous until after the 27th, after which date only a single straggler was noticed, on June 5. The first female arrived May 21.

Dendroeca castanea (*Wils.*) *Bd.* May 18 five males of this species appeared in a large flock of other Warblers. The number gradually increased, and May 23 it was only exceeded by *D. striata*. May 25 it outnumbered them all, but the day following none were seen. The females first arrived May 25.

Dendroeca pennsylvanica (*L.*) *Bd.* A small flock arrived May 3, but none were noticed again until May 8, when several others were seen. The number gradually increased, and May 12 it was only exceeded by *Setophaga ruticilla*. May 14 it outnumbered them all; from this date, however, the flocks gradually decreased, although many remained to breed. The first egg was taken June 3.

Dendroeca maculosa (*Gm.*) *Bd.* May 3 a single male arrived. May 5 a few were found in the other flocks, but none were noticed again until the 9th. A few were seen during the following days, but from the 13th to the 17th none were noticed. On the 18th, however, this Warbler rather outnumbered the other species then present, and continued very numerous until May 24. The last were noticed May 25. Two males, shot May 5, had the black of the head not continuous with that of the back but plainly interrupted with clear ash.

Dendroeca tigrina (*Gm.*) *Bd.* May 8 quite a number of males arrived, scattered through the different flocks, and the next day large flocks arrived, in numbers almost equaling *Setophaga ruticilla*. They remained quite numerous, and on May 12 it was only outnumbered by *S. ruticilla*, *D. pennsylvanica*, and *H. ruficapilla*. May 13, however, only a few were seen, but May 14 large numbers again appeared; afterwards only a few were noticed, mostly females. May 17 and 18 none were seen, and for several days only one or two were noticed, the last one, May 25. The first female was seen May 9th. Several males taken had spots on four pairs of tail feathers.

Dendroeca palmarum (Gm.) Bd. Perhaps this Warbler ought not to be included, as it was seldom seen in company with the rest, but generally noticed in the grass and in low bushes instead of in the trees. The first was seen May 1, but it was not very common until the 8th; the greatest number were noticed between this date and the 12th.

Dendroeca pinus (Bartr.) Bd. May 31 I shot from out of a flock of *D. coronata* the first specimen of this Warbler, a female. Afterwards I noticed them in many flocks but seldom found a flock composed entirely of this species, four or five being the most I have ever seen together. After May 6 it was very scarce, the last one appearing May 12, which was indeed a very peculiar specimen. It proved to be a female, with only the upper tail coverts olivaceous, the back and the head being entirely gray, there was no trace of a superciliary line, and below it was sordid whitish. Size, $4\frac{1}{8}$, $2\frac{1}{8}$, and 2. In fact, all of the specimens of this Warbler I examined were smaller than the measurements given in the "Key."

	Length.	Wing.	Tail.
Males	$5\frac{1}{4}$ — $5\frac{1}{8}$	$2\frac{7}{8}$ — $2\frac{3}{4}$	$2\frac{3}{8}$ —2
Females	5 — $4\frac{1}{8}$	$2\frac{1}{8}$ — $2\frac{1}{2}$	2 — $1\frac{7}{8}$

A peculiar male specimen had three pairs of tail blotches.

Geothlypis trichas (L.) Cab. This Warbler was always noticed over wet, swampy places, it preferring the low bushes and shrubs to the higher trees. The first was seen May 10, but they were not very numerous until the 18th, when both sexes appeared. They breed everywhere throughout the swamps.

Myiodiotes pusillus (Wils.) Bp. This Warbler was very rare in this section, only a few males being found. Two on the 12th were the first observed; the 14th I noticed one, the 18th, two, the 22nd, one, and the 23rd, four, but not together; the 24th, 25th, and 28th one was noticed each day. Always found in bushes in low, wet places.

Myiodiotes canadensis (L.) Aud. The first was seen May 10, two on the 11th and two on the 18th. The first was seen May 10, two on the 11th and two on the 18th. The 19th, however, it was very numerous, exceeded only by *D. maculosa*. The 20th it easily outnumbered the other species and remained quite numerous until the 22nd. The last two were observed May 31.

Setophaga ruticilla (L.) Sw. May 3 I noticed a single female; the 5th, a pair; the 8th, three males in different flocks, and the 9th I found them very numerous. After this date and until the 15th, they rather outnumbered the other species, when the number rapidly diminished. I found it breeding here very abundantly, the first egg being taken the 3rd of June.

THE COMMON NAMES OF AMERICAN BIRDS.

BY ERNEST INGERSOLL.

The Thrush family—here regarded in its broadest sense, for the sake of convenience—does not present a wide range of vernacular synonyms except in respect to two or three species, nor are these difficult of explanation.

The word *Thrush* is very old, appearing in substantially the same shape—the *u* sound having superseded an older *y* or *ö*—in the Icelandic and Anglo-Saxon languages. I believe that the origin of the word was a reference to the throat, or in other words to the singing powers of this family, whose voice is probably their most notable trait; and this view is strengthened when it is remembered that the old German word *drozze* coming from the same root as our English *throat* gives *drossel* in modern German as the word for “throat,” “throttle,” and also for “thrush.” Under *Thrasher* I shall adduce a further argument. From the earliest times, then, the Thrushes have been considered preëminently the song-birds of the world.

Taking up the list in regular order, the first to present itself is *Turdus mustelinus*. Its common names are: *Wood Thrush*, *Wood Robin*, *Swamp Robin*, *Swamp Angel* (Adirondacks), *Bogtrot* (South Carolina), *Alondra del Monte* (Mexico). All of these evidently refer to its habitual forest-resort and its Thrush- or Robin-like (for frequently these words are confused) character. The terms *Song Thrush* and *Grive des Bois Flûte* (Canada) point to the striking music of this bird, the French literally meaning “the flute-voiced Thrush of the woods.” Referring to

the color of the plumage are the book-names *Tawny Thrush* (Pennant, Latham) and *Merle tanné* (D'Orbigny). As for *Grasset* (Texas), I cannot explain it.

For *Turdus fuscescens*, size and color are indicated in *Tawny Thrush*, *Little Thrush* (Latham), and *Merle grivette* (Canada — literally “Little-Thrush-Blackbird”); *Wilson's Thrush* discloses its first adequate biographer; *Veery* (New England) and *Yorrick* (Thoreau's Writings) refer to its pleasing note, which they copy.

The first name of *Turdus alicia*, *Alice's Thrush*, is complimentary to Miss Alice Kennicott; the second, Gray-cheeked, is, of course, a color-mark.

Turdus ustulatus gives us *Oregon Thrush* (locality), *Willow Thrush* (California — habitual haunt), and *Russet-backed Thrush* (color). The variety *swainsoni* is usually called simply *Swainson's Thrush*, but it is also the *Olive-backed*, *Little* or *Brown Thrush*, or *Swamp Robin*.

Skipping the western types, our eastern *Turdus* “*pallasi*” comes next. Nearly all the names of this shy and solitary bird refer to its habit of haunting for the most part the undergrowth of secluded and damp woods. Its small size and distinguishingly reddish tail supply the rest. Following is the list: *Hermit* or *Solitary Thrush*; *Grive* or *Merle solitaire* (Canada); *Ground Swamp Robin* (Maine); *Little Swamp Robin* and *Rufous-tailed Thrush*.

This brings me to *Merula migratoria*, the *Robin*. The word robin is an ancient pet-name for Robert, which is of German descent. That it should have been given to the household favorite of Great Britain is not surprising; in fact some similar personal pet name has been given to that Warbler (*Erythacus rubecula*) all over Europe, and such analogues as “Jenny Wren” and “Jim” (for the Sparrow) are common. The earliest emigrants to America, finding a red-breasted bird inclined to be familiar with them, and eager to be reminded of the home for which they longed regretfully, gladly called it “Robin,” not aware, or regardless, of the fact that the old one was a Warbler and the new friend a Thrush. This fact was speedily recognized, but the old name clung, and hence we hear *Robin Redbreast*, *American Robin*, and *Robin Thrush* as surviving appellations throughout the northern half of the continent. In the Southern

States, however, the bird's resemblance to the *Turdus pilaris* of Europe came strongly to the mind of the early writers. Hence one finds in old books like those of Brickell, Lawson, Catesby and so on, that it is most often spoken of as the *Field-fair*, *Field-fear*, or *Fieldfare*; of these the last is the proper spelling, and means one who travels or *fares* in the fields; the name is yet heard occasionally.

More distinct recognition of the bird as a *Thrush*, together with its two striking characteristics—red breast and migratory conduct—gives us: *Red-breasted Thrush*, *Merle* ou Rouge gorge du Canada*, *Migratory Thrush*, *Merle erratique*, *Robin Thrush*, *Grive de Canada*, *Omschel* (Pennsylvania German—a corruption of *Amsel*, “Thrush”).

I have been able to collect many Indian names (untranslated) for this bird, the Ojibway and Navajo words seeming onomatopœic: *Opeéchee* or *Péchee* (Ojibway), *Kailee che* (Navajo—note resemblance to preceding!), *Ispokwah* (Creek), *Fiskoko* (Iroquois), *Chauncobshah* (Assiniboine). The Ojibways had very pretty legends connected with the Robin, making it a bearer of tidings from supernal sources, and so forth.

Nothing more calls for special mention until we come to *Mimus polyglottus*. Like its Latin name in both parts, its English and French appellations chiefly refer to its remarkable powers of mimicry, and date far back, for this was one of the most striking of our birds to the new comers. Thus, in the “Collections of the American Antiquarian Society,” IV, 24: “*Artamockes*, a bird that imitateth and useth the sounds and tones of almost all birds in the Countreie.” We have *Mimic Thrush*, *Mockbird*, *Mockingbird*, *Moquer* or *La Merle moquer*, and *English Mockingbird* (to distinguish it from the “French” Mockingbirds of the Southern States—chiefly *Harporhynchus rufus*). Its sweetness of voice apart from mimicry, and its habit of singing frequently after sunset or in the moonlight, caused it to be called in the English West Indies, *Nightingale*, and in the other islands *Rosignol*. This last word is only a modification of Rosignor, or Lord of the Rose—the Spanish name of the Nightingale; it is probably of Moorish descent, and has been applied to other American birds as well as this. The Mexican (west coast) name—, *Sinsonte*, is also in allusion to the bird's voice.

* *Merle*, “Blackbird,” is the French form of the Latin generic word *Merula*.

The spotted plumage is expressed in the German name *Spottvogel* or *Shpotvogel* as it is spelled in Pennsylvania. Indian names at my disposal are two: *Yuswahaya* (Florida Seminoles); and *Tshitshikniin* (Delawares).

Galeoscoptes carolinensis, *Cat-bird*, was a name early and spontaneously decided upon for this Thrush, whose *mewing* note at once suggests it. *Cat Flycatcher* (Pennant), *Merle Catbird*, *Chat* (Canada), *Katsafogel* (Penna. Germ.) and *Zorzal gato* (Cuban), all ring changes upon this point; probably Bartram's name *Chicken-bird* belongs to the same category. Color is designated in *Blackbird* (Bermudas—where also it is properly called *Mockingbird*), and in D'Orbigny's French name *Merle à derriere roux*,—the Red vented Blackbird.

The *Harporhynchus rufus* is a bird of many names suggested by more than one striking point in its character. Its strong color and mimicking voice gives us *Fox-coloured Thrush* (Bartram and others); *Ferruginous Thrush* (Wilson) or *Ferruginous Mockingbird* (Audubon); *Rufous-tailed Thrush*, *Grive rouge* (Canada), *Sandy Mockingbird* (Dist. of Col.), *Brown* or *Red Thrush*, *Red Mavis* (recalling an English songbird), and *Brown Thrasher*.

The last of these (*Thrasher*) is perhaps the most often heard of all its names in the Northern and Middle States. The word is undoubtedly another derivative from the root of *thrush* just as the Swedish *trast* is; or you may say that it came from the root of the verb *to thresh* (in Anglo-Saxon *therscan*), the original meaning of which was to make a rattling noise,—one of the most prominent of the utterances of this garrulous bird.

Its imitative powers have given it several names, such as two or three quoted above; *American Mockingbird* (Wisconsin); *French Mockingbird* (Southern States—distinguishing from *M. polyglottus*); *Carolina Mockingbird*, and so on. In the name *Corn-planter* (New Jersey and Massachusetts) we have a recognition of the time of its appearance in the spring, when the maize-seed is being put into the ground. "While you are planting your seed," says Thoreau, "he cries—'Drop it, drop it—cover it up, cover it up—pull it up, pull it up, pull it up.'"

CINCLUS MEXICANUS. The notable habits and waterside haunts of *Cinclus mexicanus*, together with its affinity to the Thrushes, have given it the name "*Water Ouzel*," for *ouzel* (or

ousel) is an old English word for Thrush, allied to the German *amsel*. Many European names exist, and we have imported one, *Dipper*; this simply means "diver," coming directly from the same root. Its small size and lively manner gives it the names *Water Wren* in Colorado, and (adding its brilliant song) *Water Oriole* on the Northwest Coast. Among the miners of Nevada it figures as *Water Turkey*, a term having as much sense as that of "Winter Geese" given by the Nahant people to the Snow Bunting.

The next names worthy of notice are those of the *Paridæ*. *Tit* originally signified something small; by itself it stood as a name of a small bird. But our word is confounded with the Angle-Saxon *mûse*, the name of several sorts of little birds in that language. It has no connection with "mouse," which comes from a different root; therefore its plural should not be *titmice*, which involves this error, but *titmouses*. The root of *mûse* signifies "to diminish," and hence the latter part of the name, as well as the former, refers to the small size of the birds—about the smallest, indeed, with which northern nations are popularly acquainted. *Tomtit* is an affectionate nickname suggested by alliteration, like *Tom Thumb*.

The local American names of our Titmouses call for short mention. *Lophophanes bicolor* is the *Tufted* or *Crested Tit* or *Titmouse*, for obvious reasons. Thomas Nuttall designated it *Peto*—I suppose after its note; and Mr. E. A. Small writes me that in Western Maryland it is called *Peter-bird*; also *Storm-bird* and *Spring-bird*, explaining that "its notes are generally heard in damp weather in the spring and late winter." No explanation is required for the word *Chickadee* belonging to several species of *Parus*, for anyone who has ever heard its

"—Saucy note
Out of sound heart and merry throat."

An allied species of the West, *Auriparus flaviceps*, is known as the *Yellow-headed Titmouse* (or in Mexican *Paro amarillo*) and *Verdin*, meaning "greenlet." In Texas its yellow-daubed head has won it the name *Fat-eater*; while the Mexicans there seek to imitate its voice in *Pitachoche*.

This brings me to the *Sittidæ* or *Nuthatches*—birds that "hack" or "cut" nuts, perpetuating an error so far as this family

is concerned.* In *Tomtit* (Ohio Valley) and *Sapsucker* (Maryland) for these birds, other errors are indicated. Buffon's *Torchepot* ("pot-cleaner") perhaps alludes to the smutty black of the face. *Chipinenee* is a good name I have heard in Southern Massachusetts, describing its well-known note very accurately.

Skipping such terms as *Brown Creeper*, *Oven-bird*, and others readily understood, I come to the varied tribe of Wrens, about which in the Old World so much of personal affection and legendary, not to say superstitious, interest gathers. *Wren* derives from an ancient root *wrin*, whence, we are told, came Anglo-Saxon words meaning to neigh (as a horse), squeal (as a pig) or chirp (as a sparrow). But the neighing horse and squealing pig of which these words were always used were uncastrated animals; and the literal meaning of *wrenne* in the Anglo-Saxon was the "little lascivious bird." Few words have suffered or admitted of less change than this during all the centuries of vicissitude through which it has passed. None of the names of our representatives of this family require special notice; it may be mentioned, however, that *Telmatodytes palustris* is *Tomtit* in South Carolina and *Reed Warbler* in Rhode Island.

The Frenchmen in Louisiana in the early days gave to their familiar Wren (probably the *Thryothorus ludovicianus*) the name *Roitelet* or "Little King." This was a direct importation from Europe, and perpetuated a bit of folk-lore, which tells us that the Wren is the superior of the Eagle, and hence King of the birds, but a diminutive King, — hence Kinglet or *Roitelet*. This supremacy was attained by the trial of the birds, in congress assembled, as to which had the greatest powers of flight. The Eagle soaring above all the rest, thought himself *facile princeps*, when an impudent little beggar of a Wren that had slyly perched

* Though it is true enough that it is an "error" so far as the general woodland habits of the *Sittidæ* in the United States are concerned, yet I know of opposing instances. For example: My neighbor in New Haven this winter has been accustomed to feed a colony of gray squirrels by placing nuts of various sorts on his window-ledge, whither they go after them. The Nuthatches discovered, and two or three came regularly all winter, feeding upon the broken nuts and often flying away with large fragments in their beaks. They would frequently place a nut in a corner of the window-frame, where it would rest firmly, and then hammer at it with their pickax-beaks most sedulously, breaking the shells of the lighter sorts, and crushing the inner septa of the heavy kinds like hickory nuts. They did not seek worms, but fed greedily upon the substance of the nut-kernel.

upon the Eagle's broad back, rose gayly over his head, repeating the maneuver as often as the baffled "King" attempted to get above him. Ever afterward the Eagle was properly respectful in the presence of the mite of a Wren that had outwitted his majesty. Many forms of this myth appear, and sometimes the statements are given as facts. Thus it is hard to tell whether or not DuPratz believes the story he tells in his "History" to account for the Kingship of Le Roitelet in Louisiana. In America we do not regard the Wren with special kindness; but in Great Britain, it is scarcely ever spoken of without some gentle, loving epithet; and the word "poor," "little," "tiny," or "dear" is constantly joined to the prefix Jenny, Kitty, Titty (*cf. antè Tit*), Jintie, or Chitty when naming it.

In *Titlark* (*Anthus ludovicianus*) we again have the prefix "small." *Lark* is a condensation of two ancient words in Anglo Saxon (*læw*, "craft," and *werca*, "a worker") which meant a worker of guile; and the etymologists tell us "the name points to some superstition which regarded the bird as of ill omen." In the Scotch form *Lavrock* or *Laverock* a near resemblance to the old Icelandic *læviriki* (meaning the same as above) is to be seen. As for *Pipit* or *Pipit Lark*, common terms, the word is derived from the same root as the verb *to peep* (like a young bird's cry) and hence a word describing its somewhat feeble chirp. In my long list of local American names for this species occur the following: *Titlark*, *Prairie Titlark*, *Lark*, *Skylark* (Dist. of Col.), *Louisiana Lark* (and many other old book-names); *Brown Lark*, *Red Lark*; *Wagtail*, *American Pipit*, *Alouette Pipé*, etc., etc.

DESCRIPTION OF A HYBRID SPARROW (*ZONOTRICHIA ALBICOLLIS* + *JUNCO HIEMALIS*).

BY CHARLES H. TOWNSEND.

On December 12, 1882, Mr. William L. Baily shot the bird here described near Haverford College, Montgomery County, Pa. Mr. Baily suspected it to be a cross between the White-throated Sparrow (*Z. albicollis*) and the Snowbird (*J. hiema-*

lis), and recently left it with me for further examination. Having compared it with specimens of these species I fully agree with him as to its hybrid nature, since it bears the prominent characters of each bird. The specimen (a male) was shot in company with the above named species, both of which are quite common here this winter.

I indorse the views of Mr. William Brewster, in regard to *Helminthophaga leucobronchialis* and *H. lawrencei*, and his explanation of several obscure species of North American birds on the grounds of hybridity (this Bulletin, Vol. VI, pp. 218-225). Hybridity is by no means of frequent occurrence among our native Passeres, and a case of it between different genera of the *Fringillidæ* is of more than passing interest, but the hybrid does not warrant a special name, as some ornithologists have thought.

Description: Intermediate in size between *Z. albicollis* and *J. hiemalis*. Bill, nearly the size of that of *Z. albicollis*, but colored like that of *hiemalis*. Throat as in *albicollis*, breast and belly as in *hiemalis*. Tail of ten feathers, outer pair white, with the basal third dark; second pair with a small white spot on inner vane; other tail feathers dark, pale-edged above. Upper plumage mainly like that of *Z. albicollis*, but suffused with the slaty color of *J. hiemalis*; white spot from nostrils to eyes. Wing-coverts white-tipped, as in *Z. albicollis*, and edge of wing faintly yellowish. Length about 7.50; wing and tail, 3. Male.

[Through the kindness of Mr. Townsend I have been able to examine the hybrid above described, which combines in nearly equal degree the characters of *Junco hiemalis* and *Zonotrichia albicollis*. The black bands on each side of the crown are narrower and less distinct than in the latter and the superciliary line is represented merely by a white spot above the lores. There is a faint maxillary stripe. The black streaks of the interscapular region are much narrower than in *Z. albicollis*, and the rufous edgings of the feathers are suffused with slate; there is also less rufous on the wings, and the rump and upper tail-coverts are also more olivaceous, and the tail is darker.

This example, taken in connection with the hybrid Swallow described sometime since by Mr. Trotter in this Bulletin (Vol. III, pp. 135, 136, July, 1878), is of the highest interest, as intimated by Mr. Townsend, as throwing light on certain obscure Audubonian species known thus far only from the single examples on which the species were based, and makes the second known case of hybridity between species of quite distinct genera among our Oscine birds. Doubtless the *Helminthophaga cincinnatiensis*

Langd, believed by Mr. Ridgway (see this Bulletin, Vol. V, p. 237) to be a hybrid between *Helminthophila pinus* and *Oporornis formosa*, may be counted as a third example of like character, to say nothing of the several probable cases cited by Mr. Brewster in the paper above referred to by Mr. Townsend. — J. A. ALLEN.]

NOTE ON EXCEPTIONS TO THE LAW OF INCREASE IN SIZE NORTHWARD AMONG NORTH AMERICAN BIRDS.

BY J. A. ALLEN.

The law of increase in size northward among North American birds and mammals is so much the rule that the exceptions to it are conspicuous from their rarity. In considering some years since the few strongly marked examples among mammals of the converse of this law I was led to formulate the following propositions:

“(1) *The maximum physical development of the individual is attained where the conditions of environment are most favorable to the life of the species.* Species being primarily limited in their distribution by climatic conditions, their representatives living at or near either of their respective latitudinal boundaries are more or less unfavorably affected by the influences that finally limit the range of the species. . . .

“(2) *The largest species of a group (genus, sub-family, or family, as the case may be) are found where the group to which they severally belong reaches its highest development, or where it has what may be termed its centre of distribution.* In other words, species of a given group attain their maximum size where the conditions of existence for the group in question are the most favorable, just as the largest representatives of a species are found where the conditions are most favorable for the existence of the species.

“(3) *The most ‘typical’ or most generalized representatives of a group are found also near its centre of distribution, outlying forms being generally more or less ‘aberrant’ or specialized. . . .*”*

* “Geographical Variation among North American Mammals, especially in respect to size.” Bull. Geol. and Geogr. Surv. Territories, Vol. II, No. 4, July, 1876.

The various families of North American Mammals were reviewed in illustration of these propositions, which they seemed to abundantly support. The only species showing a marked increase in size southward were members of the genera *Felis*, *Procyon*, and *Sciurus*. The first- and last-named have their centre of development and largest species in Southern Mexico and southward, while *Procyon* belongs, with the exception of a single species, to a family wholly tropical.

As birds, with exceedingly few exceptions, are migratory at the far North, and are thus able to escape the wintry severity of the Arctic and Subarctic regions, they are less likely to present the double decadence in size implied in the first proposition above-quoted, and really shown in some mammals. Yet the cases of decrease in size northward among the *Anatidæ* referred to by Mr. Ridgway in the last number of the Bulletin (Vol. VIII, p. 62) may fall under this head or may be viewed as only coincidences.* The few marked cases among North American birds of increase in size southward seem to occur among certain genera of Oscines which are either for the most part tropical or belong to tropical groups. Perhaps the most striking case is that of *Catherpes mexicanus*, with its two small northern races, *conspersus* and *punctulatus*. Again *Thryothorus ludovicianus* has a large southern race (*miamensis*) in Florida. The genus *Thryothorus* is mainly tropical in its distribution, and belongs, like *Catherpes*, to a subfamily chiefly represented in the American tropics.

The yellow-throated, black-masked section of the genus *Geothlypis*, a group also mainly tropical, affords several illustrations in point. *G. trichas*, the only species of the section having a wide range in North America, is the smallest of the group, with a large race in Mexico and another large race in the Bahamas. *G. poliocephala* is represented by a small race in Mexico and a larger one in Central America. *G. æquinoctialis* is represented by a large race in equatorial America and a smaller one in Brazil.

In *Pyrranga*, the only North American genus of a tropical American family, *P. æstiva* of the United States is represented by a larger race (*cooperi*) in Mexico. *P. saira*, of equatorial

* So far as the distribution and breeding ranges of *Fulix marila* and *F. affinis* are known to me they seem to hardly fall into the category here cited.

America, has a smaller northern race in Central America. *P. hepatica* of Mexico has, according to Mr. Ridgway, a smaller southern race in Paraguay. In reference to this latter case, and to *Geothlypis poliocephala*, decrease in size southward south of the equator is equivalent of course to decrease in size northward north of the equator.

The instances of decrease in size southward in North American Oscines above-noticed—and they embrace all the marked ones that I now recall—seem to be explainable under and illustrations of the first proposition above cited. In general, North American birds belong either to northern or cosmopolitan types, with a few pertaining to distinctively tropical American groups which are represented with us by a few outlying members; and it is among these that we note the exceptional increase in size southward.

Geographical variation in size in birds has been hitherto discussed chiefly in reference to those of North America, but that the law of decrease in size southward also holds for the birds of Europe and Asia is indicated beyond question, but not at present perhaps equally demonstrable. That south of the equator there is, as there should be on general principles, an increase in size southward among conspecific forms is also susceptible of illustration, but it is beyond the province of this note to enter upon the subject here. Later there may be occasion to take up the matter in detail.

BIRDS OF THE LOWER URUGUAY.

BY WALTER B. BARROWS.

It was in the early days of July, 1879, that the writer entered the waters of La Plata and through the chilly mists which were driven before a stiff "pampero" beheld the great flocks of Gulls and Terns which, during the winter months, make these waters their home. Two months later he was set down in the darkness of early morning on the muddy shore of the west bank of the Rio Uruguay, about 200 miles north of Buenos Aires, at the old town of Concepcion del Uruguay. In the immediate vicinity of this

place most of the observations recorded here were made, and unless otherwise stated it will be understood that all notes refer to observations made at Concepcion.

The whole number of species taken here was rather less than two hundred, but allowance must be made for the fact that only a small part of the time spent here could be given to collecting, and that not unfrequently entire weeks passed without any opportunity occurring for so much as an hour's tramp outside the town.

During his entire stay here the writer was connected with the Colegio Nacional, and it so happened that the times of greatest activity at this institution usually coincided with those periods of increased activity among the birds — the vernal migrations and the breeding seasons.

Excursions were made, it is true, to many points from ten to thirty miles from the town, but these were not often possible, and observations in the main were confined to the country lying directly about the town.

Concepcion lies in about $32\frac{1}{2}$ degrees south latitude, and the range of temperature is from 100° Fahr. in January and February (only observed on two or three occasions) to 38° or 40° in May and June. Yet heavy frosts frequently occur during these two latter months and April, while a change of wind to the north may, even in mid-winter, make the weather oppressively hot during the day.

The region about Concepcion shows considerable diversity of surface, but no hills, and no heavy woods of any extent. Rolling grass-land or prairie alternates with cultivated farm or sterile sand-waste where only the dwarf acacia and spiny cactus seem to thrive. Wherever a stream is struggling for existence a few trees and bushes may be found extending in mute sympathy their scanty foliage, and if we follow such a stream till it emerges into the flood-plain of the river we may find the remains of what were once goodly forests of swamp-loving trees — now decimated by the charcoal-burners in their efforts to meet the demands for fuel of a land practically without mineral coal and in large measure treeless.

By no means all this flood-plain is wooded, and while unmo-
lested tracts of swamp forest still exist, they are yearly lessening in number and extent. And there are vast treeless marshes also where water-birds and mammals have things all their own way

unless an unusually dry season makes their abode convenient grazing ground for herds of cattle, or an unusually wet one brings all flesh into competition along the edge of hard ground, often several miles back from the river margin.

The river itself varies in width from half a mile in a few places to five times that distance in others, while in time of flood ("creciente") it oversteps all bounds and claims the whole valley from bluff to bluff.

Owing to the mildness of the winter comparatively few birds seemed to be really migratory at this place, and from the irregularity of the observations made during the spring, and the fact that only one entire spring was spent at Concepcion, the dates of arrival in most cases can be only approximately inferred.

The few brief visits which were made to large tracts of heavy woods showed that undoubtedly many other species than those actually obtained might have been found there at different seasons or under more favorable circumstances. This is certainly true with regard to birds of prey, several species of which were not met with at all outside of these tracts, though abundant there, while still others were not taken at all, though known to abound in other parts of the province. Another season in the same locality would doubtless yield many other species, yet probably not many which are *regularly* to be found in any considerable numbers were overlooked.

Late in January, 1881, the writer became one of a party delegated by the Argentine Government to make a provisional examination of the fauna and flora of the Pampean Sierras in the extreme southern parts of the province of Buénos Aires,—a region but imperfectly known, and at that time only recently vacated by hostile Indians. Although about ten weeks were spent in this work less than half was of any real value, owing to the lateness of the season, the imperfect organization of the party, etc. The party went by rail on January 25 from Buenos Aires to Azul—over 200 miles south-west; thence forward 250 miles by diligence to Bahia Blanca on the coast in latitude $38\frac{1}{2}$ degrees south, this being the southernmost point reached. From this place the course was north 50 miles by saddle and wagon to the Sierra de la Ventana (Windowed Sierra) and then westward 75 or 100 miles along the base of these mountains and the Sierra de Currumalan to the military posts of Puan and Carhué, at which

last point we arrived early in April, returning thence directly to Azul and Buenos Aires.

During this trip about 800 miles of the pampas were hastily crossed and the largest part of the time passed among the desolate sierras and the hardly more fertile plains at their feet. Collections were made at all favorable points, but, the season being late summer and autumn, the birds taken were largely migrants and nearly all well-known species. Whatever of interest with regard to them was collected has been incorporated in the notes which follow.

1. **Turdus leucomelas Vieill.** ZORZAL (THRUSH) of the Entre-Rianos.—This bird abounds at Concepcion the year round, and was taken also at Buenos Aires. It was not observed either at Azul or any of the points further south. It is found in the gardens of the town as well as in the depths of the swampy woods, but never seen far from leafy cover of some kind, and does not appear at home on the ground. It is very unsuspicious and is frequently caged and becomes reconciled to its imprisonment, yet is not very musical. The nest is usually well hidden among the tops of bushes or masses of twining plants, never more than ten feet from the ground, and resembles in general the nest of our own Robin, but is smaller and contains no mud in its composition, so far as my observation goes. The eggs, commonly four, are splashed and dotted with several shades of brown on a dirty green ground. Sets were taken through October and November, and frequently the eggs of the Cowbird were found with them.

2. **Turdus rufiventris Vieill.** ZORZAL VIENTRE COLORADO (RED-BELLIED THRUSH).—Less abundant and more retiring than the preceding; seldom seen except in the woods. Resident through the year at Concepcion. In breeding habits precisely similar to the preceding, and the nest and eggs of the two species are generally indistinguishable, though the eggs of the present species would probably average a little larger.

3. **Mimus calandria (Laf. & d'Orb.).** CALANDRIA.—Very abundant and well known, and resident at Concepcion through the year. Undoubtedly a fine singer, but its song, so far as my observation goes, is far inferior to that of our own Brown Thrush (*Harporhynchus rufus*), and cannot approach at all that of our Mocking Bird. I have never heard it sing for more than

a minute and a half or two minutes at a time, and even then the notes were disjointed.

The nest is very bulky, placed within five or six feet of the ground, and composed of sticks, roots, and grass. The eggs, three or four in number, are greenish white, with dots and splashes of brown, both colors varying widely in precise tint in different specimens. Eggs were taken from October 28 until January 15, but doubtless many are laid by the first or middle of October.

This is one of the few large birds regularly imposed upon by the Cowbird. In one case four of the latter's eggs were found in a nest with but two of the owner's.

This species was not met with south of Buenos Aires, unless a single bird was seen near the Sierra de Curumalan. Although this specimen was not taken, there is little doubt that it was *Mimus patagonicus*, which replaces *M. calandria* in Patagonia.

4. **Poliophtila dumicola** (*Vieill.*).—An abundant bird at Concepcion among trees and bushes everywhere, many remaining through the entire year, though perhaps not as many were seen during the colder weather. The beautiful lichen-covered nests were frequently found during November; always in plain sight but very difficult to see, and most often betrayed by the birds themselves. They were rarely placed more than five or six feet from the ground,—oftener only three or four,—and almost invariably contained three eggs, which in color and markings were precisely like those of *P. cerulea*.

5. **Troglodytes platensis** *Bp.* TACUARA or TACUARITA;—probably so called from its fretting notes (*taques*).

Abundant everywhere—in the towns as well as in the gloomiest swamps and sandiest cactus patches, and equally abundant summer and winter. It nests, like its cousin *T. ædon*, in any cavity which takes its fancy. Probably two broods are reared each season, as many were nesting early in October, and fresh eggs were taken as late as January 3, at which time I took a set of seven from the hollow of a decayed stub which overhung the river. In nest, eggs, and song, this bird so nearly resembles *T. ædon* that anything more on these points is superfluous. From its sociable disposition (towards man at least) one is often surprised to find it in the most out-of-the-way places, as, for example, in the lonely gorges of the Sierra de la Ventana, where its rich song more than once gave me a pleasant surprise.

6. **Cistothorus platensis** (*Lath.*).—Only observed on one or two occasions in the half-flooded meadows which border the stream at Carhué.

7. **Anthus correndera** (*Vieill.*).—Found everywhere in open ground, singly or in pairs in summer, usually in loose flocks in winter. The great variations in color, length of hind claw, etc., have given rise to several named varieties and species, all now referred to this one species. The bird doubtless breeds throughout the whole country, but I was unable to find a single nest or gain any reliable information as to its breeding habits. Half a dozen different birds of about the same size and general color are commonly called by the same name—"Chingolo"—and this bird is rarely distinguished from the common *Zonotrichia*, even by the gauchos, who are usually very observant of all living things found on the pampas.

8. **Parula pitiayumi** (*Vieill.*).—These beautiful little birds, so similar to our own Blue Yellow-backed Warbler, were first noticed at Concepción July 7, 1880, when a single female was taken. A few days later they became quite abundant and were occasionally seen afterward until about October 1, after which time I did not take any. They were quite partial to blossoming trees, especially willows, doubtless attracted by the abundance of insects there.

One specimen (No. 719) seemed to be abnormal in coloring, showing many white feathers in the forehead; and on skinning, the flesh was found thickly spotted with oval, white lumps about the size of the eggs of the common "blow-fly." These were most numerous toward the surface of the pectoral muscles, but occurred also deeply imbedded in their substance as well as in the muscles of wings and legs. It was not practicable to examine their structure with the microscope until the next day, when decomposition was so far advanced that little could be made out. In all probability, however, they were the encysted larvæ of some parasitic worm, though whether they had anything to do with the abnormal plumage is an open question.

Of the breeding habits of this species nothing was learned, nor was the bird met with at other points visited.

9. **Geothlypis velata** (*Vieill.*).—Abundant in low, bushy ground from early October until late in January, and doubtless breeds. On November 6, 1879, a gaucho brought me a set of

three small eggs taken from a nest of grass, etc., placed in a low bush. He gave a minute description of the bird, which he called "Jilguero," and which could have been no other than the present species. The name "Jilguero" is only properly used for the Goldfinch (*Chrysomitris magellanica*) but any small black and yellow bird would receive this name for lack of a better. The eggs, now before me, are white with a faint creamy tinge and spotted at the larger end with chestnut, the spots on one egg being small and of pretty uniform size, and on the other two coarser with some large blotches; they average .82 X .62 inch. The male has a pleasing song, much like a very subdued imitation of the warble of the Purple Finch (*Carpodacus purpureus*).

10. **Cyclorhis viridis** (*Vieill.*).—This bird was frequently met with at Concepcion during spring and summer, being most abundant in July, August and September, but many doubtless remain through the summer and breed, though no nests were found.

The bird's favorite haunts seem to be the tangled thickets and low woods which border the streams and render so many of the river islands almost or quite impenetrable. Here, walled in by netted masses of jasmine, sarsaparilla, and passion flowers, there was little fear of interruption, and the male was often heard pouring forth his strong, clear warble with an energy which always suggested a bird of twice his size.

11. **Progne chalybea** (*Gm.*). GOLONDRINA MAYOR (LARGER SWALLOW).—All the Swallows are known as "Golondrinas," and when it is desired to indicate a particular species an appropriate adjective is used.

The present species arrives at Concepcion from the north somewhat later than the smaller Swallows and is not so abundant, though its voice is usually to be heard at any hour of the day during the breeding season.

During October and November the nests are built,—usually in hollows beneath the eaves of houses and sheds. Of the eggs I know nothing.

On October 22, 1880, I spent nearly the whole afternoon in watching several hundreds of this species and *Progne tapera*, catching dragon-flies. A high, cold, south wind ("pampero") was blowing and the dragon-flies were massed by thousands on the leeward sides of the bushes near the top of a bluff. Benumbed

with the cold they only flew when hard pressed, and were then almost inevitably swept by the wind directly into the waiting mouths of the birds. Selecting a bush on which a peck or two of the insects were clinging, I would dislodge them by a sudden shake, and in an instant become the centre of a flock of voracious birds, which seemed to have lost all fear and were intent only on the helpless insects, which were snapped up often within a foot or two of my face.

The dragon-flies were of medium size, having a spread of perhaps $2\frac{1}{2}$ to 3 inches. They did not cling to each other like bees or locusts but simply crowded as near as possible, clinging so thickly to twigs and leaves as to hide entirely the color of the foliage and transform green mimosas into shapeless masses of gray and brown.

12. **Progne tapera** (*Linn.*).—This species appeared in the spring at about the same time as the preceding—about the middle of September—and for some time I did not distinguish it from the female of that species.

In general habits the two species are quite similar, but the notes are somewhat different and the present species is more often found away from the houses than is the common Martin, nor does it, so far as I know, ever breed under the eaves of dwellings. Probably the greater number breed in natural hollows of trees, or in the abandoned nests of other birds. I once noticed several hovering about Woodpeckers' holes in a tall dead tree, and early in November, 1880, saw a female carry a feather into a deserted nest of the Oven Bird (*Furnarius rufus*), where I caught her in my hand as she was arranging the materials of a nearly finished nest.

13. **Progne elegans** *Baird.*—Specimens were taken at Bahia Blanca, where the birds were abundant, and they were frequently seen in the Sierra de la Ventana. While at Carhué and Puan—March 21 to April 9, 1881—none were seen, but the weather was so cold that doubtless they had then gone north. At Concepcion this species was never observed.

14. **Hirundo** (**Tachycineta**) **leucorrhoa** (*Vieill.*).—GO-LONDRINA (SWALLOW).—By far the most abundant Swallow at all points visited. Arriving from the north early in July, it remains through the summer and does not leave until the following April. Abundant alike in the crowded streets of Buenos Aires and on the monotonous pampas, it is known everywhere by the name

Golondrina, and its appearance after the cold weather is hailed as one of the earliest signs of returning summer. Through October and November it breeds at Concepcion wherever it can find a suitable spot, placing its nest of grass, wool, and feathers in any safe cavity about a dwelling-house or shed, or not infrequently in the deserted nest of a *Furnarius* or *Anumbius*.

From a nest of the latter bird I took a set of this Swallow's eggs—five in number—on October 30, the parent birds hovering close about my head as I examined the nest. The eggs are pure white. During the mating season the male has a very pretty song not unlike that of the Eastern Bluebird, though not as long, and seldom delivered without interruption.

15. **Atticora cyanoleuca** (*Vieill.*).—This species was first seen at Concepcion September 4, 1880, when it was observed in considerable numbers, associated with the preceding species, from which it was easily distinguished by its smaller size and the absence of the white rump. For nearly six weeks it was observed here from time to time, but after October 20 it was not noted until at Azul it was found in large flocks January 27, 1881, seemingly ready to migrate northward. It was seen, however, at Bahia Blanca a few days later and then almost daily until March 28 at Puan, after which it was not again observed. Of its breeding habits I know nothing.

16. **Cotile ruficollis** (*Vieill.*).—Abundant at Concepcion through the summer, arriving from the north early in August. It is said to nest in holes in banks, and I once dug out several deserted Swallow's nests supposed to belong to this bird, though none were seen in the neighborhood. The nests were of straw and feathers at the ends of holes about two feet in depth, and in pretty hard earth which formed a bank eight or ten feet high beside a small stream. A bird of this species frequently visited an open and deep well just in front of my door. I repeatedly saw it descend into the well but could never see it come out, or find it within. Probably it hid itself between the stones of the wall where it was prospecting for a home which it failed to find.

17. **Stephanophorus leucocephalus** (*Vieill.*). **CARDINAL IMPERIAL**.—A more beautiful bird than this Tanager it would be difficult to find, at least on the Uruguay, and when, in one of those narrow passages between the islands where the trees lean toward each other and solid walls of green rise on either side your

boat, you see a pair of these blue beauties swaying on a slender bush and showing at each turn of the head the snowy crown with its little dash of garnet, while the whole picture lies mirrored in the quiet water, it requires a prompt choking of all poetic feeling to make sure of your bird. Otherwise the next instant may find you looking vacantly at the swaying twig and wondering where the birds—and your senses—are. Although shy and suspicious the birds are really plenty enough, and after you learn where to look for them you may find them in pairs at Concepcion any day in the year. Somewhere among these river-fringes the nest must be built, yet it was always sought in vain.

The male during the breeding season has a strong, sweet warble recalling that of the Pine Grosbeak, but at other times both sexes are very silent, giving only a faint, quick chirp of alarm as they disappear.

18. **Tanagra striata** (*Gm.*). NARANJERO (ORANGE BIRD).—This well known and widely distributed species is abundant at Concepcion through the year and many undoubtedly breed there, but I did not meet with the nest. When seen at a little distance and in motion this bird always reminded me of the Baltimore Oriole, to which, indeed, it bears no little resemblance both in color and action.

The name "Naranjero" comes from a popular belief that the bird feeds on ripe oranges, and is given to several different birds which frequent the orange trees more or less. I have never seen any evidence, however, of any of the fruit being eaten by them.

19. **Tanagra cyanoptera** *Vieill.* NARANJERO AZUL (BLUE ORANGE BIRD).—The least common of the Tanagers, but occasionally observed, both summer and winter. A female taken November 6 had evidently just finished incubating.

20. **Pyranga saira** (*Spix.*).—But little more abundant than the preceding, perhaps really not as plenty, but its red dress makes it much more conspicuous. It was only observed during the early spring, and no evidence of its ever breeding in the vicinity of Concepcion was obtained. The specimens observed were silent, sluggish, and not very wary.

21. **Saltator aurantirostris** *Vieill.* JUAN-CHIVIRRO (imitation of its note).—The voice of this bird is much better known than his form. It would be impossible for one to row along the woody shore of the Uruguay a hundred yards in spring-

time without hearing the hearty voice — more emphatic perhaps than beautiful — but you might often row on for miles without a single glimpse of the bird himself.

He stays all winter at Concepcion and doubtless breeds there during the summer, but the nest and eggs were not taken.

22. **Guiraca glaucocærulea** (*Lafr. & d' Orb.*). — Not uncommon during spring and summer, with habits and song much resembling those of our Indigo Bird, which it so nearly approaches in plumage. Of its nesting habits I am ignorant, though it certainly breeds about Concepcion.

23. **Spermophila cærulescens** *Vieill.* CORBATITA (LITTLE CRAVAT, in allusion to the black collar and white band above it). — Early in November these birds arrive in Concepcion from the north and soon become very common everywhere, but seem to prefer bushes, hedges, and tall weeds.

During the first week in December many nests were found which occasionally contained but one egg each, and never more than two, which seemed to be the normal number. The nests were very neat affairs, made entirely of fine grass, roots, and hair; so closely woven as to be very strong, yet so thin and delicate that the eggs could often be seen through the bottom. The nest was sometimes placed in a mass of fine twigs to which it was bound, but oftener it was only fastened to three or four vertical twigs which passed through its rim, thus making the nest semi-pensile. Rarely was it more than four feet from the ground. The eggs were white with dark flecks. Late in the summer the birds gather into loose flocks or small parties and turn northward again.

24. **Spermophila palustris** sp. nov.

Adult male: breeding plumage. Above, from bill to rump, clear bluish-ash; below, from bill to middle of breast, including lower eyelid, ear-coverts, and sides of neck, pure white; rest of under parts; rump, and most of upper tail-coverts, bright cinnamon-brown. Wings and tail brownish-black edged with whitish; inner secondaries deep black, their tips and outer edges broadly white (pure in highest plumage, at other times soiled or even rusty); a white patch across the base of all the primaries except the first two. Bill and feet black; iris dark. Length, about 4.50 inches; extent, about 7.00; wing, about 2.18; tail, about 1.70.

In some individuals, even in high plumage, the ashy feathers of the back show blackish centres.

Adult female: breeding plumage. Above, uniform greenish-olive obscurely streaked with dusky; below, light yellowish-buff; wings and

tail nearly as in male but duller, and the inner secondaries with narrower and more yellowish edgings; white spot on primaries same as in male. Upper mandible brown, lower pale yellowish. Length, 4.15 inches; extent, 6.65; wing, 2.07; tail, 1.65.

A male, seemingly immature, yet taken at the same time as the others and in breeding condition, has the upper parts precisely like those of the female, except that most of the greenish-olive is replaced by brownish-olive; the edgings of inner secondaries are broader and lighter, and the rump shows several cinnamon feathers. Below, the color is a mixture of pale buff and cinnamon, all the feathers of the chin and throat showing hoary tips, while the middle of the belly is nearly pure cinnamon.

An adult male taken in late summer (Feb. 2, 1880) is not essentially different from specimens taken in November and December. The areas of color are the same; the white is soiled, the cinnamon pale and dull, the ash of head and back has given place to a dirty gray by the wearing away of the tips and edges of the feathers, and the inner secondaries have lost their light edgings in the same way.

This diminutive Finch seems to resemble *Sporophila hypoxantha* (Cab.) more than any other member of the genus, and it would not be strange if a careful comparison of *palustris* and *hypoxantha* in their different plumages should result in the fusion of the two under one name. As no specimen of *hypoxantha*, however, is at present available for comparison, reference to its descriptions alone is possible, and if they are correct there can be little doubt of the specific distinctness of the present species.

Early in February, 1880, two specimens of an unrecognized Finch were seen by the writer on the edge of a marsh at Concepcion where coarse grass is cut for thatching the houses of the humbler classes. One of these birds was secured and pronounced by Dr. Burmeister of the Buenos Aires Museum to be new to the fauna of the region, so far as he was aware. A careful lookout for other specimens was kept, but nearly ten months elapsed before another individual was taken.

Resting one hot November noon in the scanty shade of a bush on the edge of one of the large marshes which border the lower Uruguay, my ear caught the notes of a song which seemed at first to be that of the common Goldfinch of the country (*Chrysomitris magellanica*) but which, as it rambled on, developed a variety and sweetness far beyond the powers of that bird. An attempt being made to approach the bird, however, it developed other powers of a more practical and (to me) less satisfactory kind, and it was only after a half-mile chase through an indescribable mixture of land, water, and grass—the latter predominating—that a lucky third shot brought it down and a long hunt

among the roots of the eight-foot grass brought to light this tiny *Spermophila*.

Before the gun had been reloaded, or the bird wrapped up and put away, another male appeared, and in the course of an hour or two three more specimens, all males, were added to the first. Many more were seen and several killed, but the nature of the ground made it very difficult to mark them down and find them, while their motions were so quick, and the grass so thick and high, that not one shot in three counted. No females were seen at this time, but within the next two weeks four more males and two females were taken.

That they were nesting in the marsh there is little doubt, but that the nest escaped detection is not strange. The birds were never seen in flocks nor did they often associate with the "Cor-batitas."

The males were oftenest seen chasing each other over the marsh or pausing on the top of some tall grass stem or blighted bush to pour out their delightful song.

Occasionally I caught a glimpse of a small bird in a flock of *Sycalis luteiventris*, which seemed to be unlike anything except this little *Spermophila*, yet may easily have been mistaken. Our little Finch is too fond of the open marsh, the society of the Wood Ibis and Courlan, and the rustling of the knife-edged giant-grass, to be found far from such haunts, and so long as he swells his snowy throat only in such company he need fear little from man.

(To be continued.)

DESCRIPTIONS OF NEW SPECIES OF BIRDS FROM SANTO DOMINGO.

BY CHAS. B. CORY.

Contopus frazari. General plumage grayish-olive; feathers of the crown dark brown, edged with olive; throat ashy, becoming olive on the sides of the breast and yellowish-brown on the abdomen and crissum; wing-coverts pale at the tips, forming two very dull wing-bands; secondaries very narrowly edged with pale brownish-white; tail brown; under wing-coverts pale yellowish-brown. Length, 5.40; wing, 2.45; tail, 2.65; tarsus, .50; bill, .50.

I have named this species in compliment to Mr. M. A. Frazar, by whom it was collected.

Sayornis dominicensis. General appearance of the last species but much larger; abdomen and crissum showing an orange tinge; olive of the sides darker; tail feathers narrowly tipped with dull white. Length, 6; wing, 3; tail, 2.75; tarsus, .62; bill, .55.

I have placed this species in the genus *Sayornis* provisionally.

Myiarchus ruficaudatus. Crown dark olive brown, becoming lighter on the back and showing a more decided grayish tinge. Throat and breast ashy; belly, crissum and under wing-coverts, pale yellow; wing-coverts edged with brownish-white, forming two dull wing-bands; tertials broadly edged with yellowish-white. Primaries, except the first, narrowly edged with rufous on the outer rib, showing a broader and much paler edging of the same color on the inner webs of the same feathers. Two central tail feathers dark brown, all the rest having more than half of the inner web *rufous to the tip*. Bill and feet, black. Length, 7.25; wing, 3.50; tail, 3.25; tarsus, .75; bill, .75.

The above may be easily distinguished by the tail markings. *Myiarchus stolidus* from Jamaica approaches it closely, but lacks the bright rufous on the outer tail feather.

Strix dominicensis. General plumage above dark brown, shading into orange-rufous on the side of the neck. Quills showing inner webs brownish, outer webs dull orange-rufous, banded with brown. Entire underparts pale orange-rufous mottled with light brown, whitening somewhat on the throat and abdomen. Face deep gray; an ante-orbital spot of black; circle of feathers around the face dark chestnut, bordered with black on the throat. Tarsus not feathered to the feet. Length, 13.50; wing, 10; tail, 4.60; tarsus, 2.45.

HOLBÖLL'S RED-POLL (*ÆGIOTHUS LINARIA* *HOLBOELLI*) IN NEW ENGLAND.

BY WILLIAM BREWSTER.

HAVING occasion, recently, to look up the distribution of Holböll's Red-poll I was astonished to find that it has never been formally accredited to New England, nor even, unless I

have overlooked some obscure record, to any portion of the United States, specimens taken by Cooper at Quebec, being apparently the most southern ones thus far reported. Some one has lately said that we know more about the birds of our remote western plains and mountains than of those which occur nearer home, and it is, perhaps, idle to deny that such a charge contains a grain of truth. At least the past decade has brought many surprises to the student of New England ornithology and it is not likely that the supply is exhausted.

We now have an interesting development affecting New England Red-polls. Among extensive series of *Ægiothi* taken in this vicinity, a small proportion — usually from five to eight per cent — will be found to differ from the ordinary type in being very much larger, with stouter, less acute bills, generally darker coloring, and especially darker, coarser streaking beneath. These birds, if I am not mistaken, are Holböll's Red-poll (*Ægiothus linaria holboëlli*)*. I have known them these fifteen years or more, as regular, though never very common associates of the Lesser Red-poll, during the latter's winter incursions, a good-sized flock of the common species being usually pretty sure to contain a few of the larger kind. Previous to the present season they do not seem to have occurred in any considerable numbers, but during the past month (February, 1883), they have been actually abundant near Boston, and, on several occasions, have been found in flocks apart from the smaller species.

I had an experience of this kind on February 19, when collecting at Revere Beach in company with Mr. H. M. Spelman. The day was cold and blustering and birds, as is usual at such times, were exceedingly active and restless. Flocks of Red-polls were continually passing, occasionally alighting among the seed-bearing weeds, or clustering for a moment on the spire of an isolated cedar, the next whirling off as suddenly as they came. Under such conditions it was impossible to identify all the individuals seen, but we satisfied ourselves that most of these flocks were made up chiefly of the larger race, while one or two were positively ascertained to contain only the smaller kind. Of the twenty-one specimens actually taken thirteen proved to be *Æ. holboëlli*.

* In making this determination I take it for granted that authors are right in referring the American bird to *Æ. holboëlli* of Europe.

A more conclusive instance came to my knowledge a few days later. On February 22 two young collectors happened to fall in with an exceptionally large flock of Red-polls at Nantasket Beach. A few shots into the crowded ranks of the unsuspecting little birds brought down forty specimens, twenty being actually killed at one discharge. I had the good fortune to examine these specimens in the flesh and out of the total number *thirty-four* proved to be *Æ. holboëlli*.

In the present connection it may be worth while to point out some of the characters by which *linaria* and *holboëlli* can be distinguished, especially as this does not seem to have been very thoroughly done, at least in any of our recent works. It will be understood of course that the following remarks are based on Massachusetts specimens and hence relate to winter conditions only.

Upon comparison of well-marked examples the difference between the two forms is at once apparent. *Holboëlli* is considerably the larger bird* and its bill† is very much stouter‡. The upper mandible is relatively, as well as actually heavier, and more decidedly decurved, its superior outline being often noticeably convex, whereas in *linaria* it is nearly if not perfectly straight. The hind claw, also, is usually, but not always, longer.

In plumage the two forms differ scarcely less strikingly. *Holboëlli* is very much the darker and more heavily marked; the dorsal feathers lack most of the whitish or ochraceous edging so conspicuous in winter examples of *linaria*, the general coloring above being nearly uniform dark brown; the streaks on the sides are blacker, coarser, and more numerous; the forehead darker; the rosy color beneath of the adult male is duller and more restricted, being usually confined to the breast and jugulum.§

* An adult female in the flesh is equal in size and weight to an average Purple Finch (*Carpodacus purpureus*).

† In some diagnoses the bill of *holboëlli* is described as being wholly yellow, but authorities are not agreed on this point. In the present examples the color of the bill does not differ from that of *linaria*.

‡ The bill is often apparently stouter but never, so far as my specimens show, absolutely so, the effect being produced partly by its greater depth and partly by the fact that the nasal plumules are longer and conceal more of the base.

§ I have seen one specimen in which the rosy was similar in tint and extent to that of *linaria*. Possibly the fully mature birds do not often range as far south as Massachusetts.

*Measurements.** Five adult males. Wing, 3.10-3.30; tail, 2.46-2.64; length of bill from base, .40-.45; depth of bill at base, .25-.28.

Five immature males. Wing, 3.-3.14; tail, 2.27-2.65; length of bill from base, .40-.45; depth of bill, .25-.26.

Five females. Wing, 2.95-3.07; tail, 2.34-2.55; length of bill, .36-.41; depth of bill, .24-.25.

The above characters have been taken from what I assume to be typical representatives. Between these extremes my series furnishes a perfect intergradation in size and a partial one in respect to shape of bill, coloring, markings, etc. Nevertheless I have yet to see a bird which cannot be consistently referred to one or the other form when the bearing of *all* its characters is carefully weighed. Moreover, it is significant that the apparent connecting links are furnished by large adult *males* of *linaria* and small *females* of *holboelli*, the variations among individuals of the same age and sex failing to afford any real intermediates. Taking this fact into account, and without regard to what has been previously written on the subject, I should interpret the evidence at hand as indicating that *linaria* and *holboelli* are forms closely allied, but nevertheless sufficiently segregated to rank as distinct species. Dr. Coues and Mr. Ridgway, however, agree in treating their relationship as a varietal one, and this opinion, based, as it is, on exceptionally favorable opportunities in respect to the examination of material, should not be lightly disregarded. Still I cannot help suspecting that this point, as well as certain others offered by the genus *Ægiothus*, will bear further investigation, and that this may lead to more or less important changes in the arrangement at present accepted.

It is worthy of note that most of the *Holböll's* Red-polls taken here this winter have occurred on or very near the sea-shore. Indeed, there is no evidence to show that they have been more

* Without going into details of measurements of a large series of *linaria* before me, I will simply remark that out of some sixty specimens, only two (both of which are adult males) give a longer wing-measurement than the smallest *holboelli*. The larger of these has a wing 3.08 inches long. In at least nineteen cases out of twenty, however, I find it perfectly safe to refer a Red-poll with a wing-measurement of 3 inches or over, and a depth of bill of .25 inches or over to *Æ. holboelli*; that is, such a specimen will present most, if not all of the other characters already pointed out as distinguishing this form. In the twentieth case size must be disregarded and the other characters carefully considered. This, of course, relates to New England specimens only.

than usually numerous in Cambridge, Belmont, and other inland towns. This fact may have no real significance, but if we assume that *Æ. holboelli* is chiefly a littoral form, there is less difficulty in understanding why it has so generally escaped notice, for, until very recently, our sea-coast has been rarely visited by collectors during the winter months. Still the bird does occur far inland, for Dr. Merriam writes me that it visits Lewis County, New York, and Mr. Maynard has some typical examples from Minnesota. Perhaps, as with the Lapland Longspur, there is a case of partially interrupted distribution to be made out; at all events it must now be formally entered in the books as an irregular but sometimes abundant winter visitor to New England, as far south at least as Massachusetts. We fear such notoriety will scarcely be to the little stranger's advantage in these days of active collecting.

Recent Literature.

THE BRITISH MUSEUM CATALOGUE OF BIRDS.—Since our last notice of this work (see this Bulletin, Vol. III, April, 1878, pp. 77-79) three additional volumes* have appeared, namely, Volumes IV, V, and VI. Volume IV, like the previous volumes, is by Mr. Sharpe, as is also volume VI, while volume V is the work of Mr. Seebohm. Volume IV is devoted to the two families *Campophagidæ* and *Muscicapidæ*, both composed exclusively of Old World forms. Of the *Campophagidæ* 148 species are described, of the *Muscicapidæ*, 391. In style of treatment and general character this volume is similar to the earlier ones, already noticed at some length in this Bulletin.

Volume V, by Mr. Seebohm, is devoted to the *Turdidæ*, as this group is defined in Mr. Sharpe's scheme of classification, with limits rather dif-

* Catalogue of the Birds in the British Museum. Vol. IV. Catalogue of the Passeriformes, or Perching Birds, in the British Museum. Cichlomorphæ: Part I, containing the families *Campophagidæ* and *Muscicapidæ*. By R. Bowdler Sharpe, London, 1879. 8vo, pp. xvi+494, pll. xiv. Vol. V. Catalogue of the Passeriformes, or Perching Birds in the British Museum. Cichlomorphæ: Part II, containing the family *Turdidæ*, (Warblers and Thrushes). By Henry Seebohm, London, 1881. 8vo, pp. xvi+426, pll. xviii. Vol. VI. Catalogue of the Passeriformes, or Perching Birds, in the collection of the British Museum. Cichlomorphæ: Part III, containing the first portion of the family *Timeliidæ* (Babbling Thrushes). By R. Bowdler Sharpe. London, 1881. 8vo, pp. xiii+420, pll. xviii.

ferent from those usually assigned it. It embraces not only the typical Thrushes (subfamily *Turdinæ* of authors generally), but the *Sylviidæ* (subfamily *Sylviinæ* of this work), and the *Saxicolidæ*, which form part of the present author's *Turdinæ*. On the other hand the *Miminæ*, so generally of late regarded as a subfamily of the *Turdidæ*, are excluded. In respect to genera, Mr. Seebohm is eminently and, as we believe, laudably conservative; but in matters of nomenclature he is in some points a law unto himself. In other respects he shows himself to be refreshingly independent and untrammelled by traditional methods of working. In his "Introduction" he strikes the key-note of, for our English friends, a new departure in respect to the treatment of subspecific forms so boldly and with such a true ring that we cannot resist the inclination to let him be heard in part in his own words, even at the expense of extending this notice beyond usual limits.

In respect to genera and generic characters his position is somewhat out of the usual line, as may be seen from the following summary of his remarks on these points, and he expects to be thought more or less heterodox in his treatment of genera.* "If I am accused," he says, "of disturbing the existing genera of birds, in some instances by cutting up recognized genera, and in others by uniting several together, I can only plead that I have not done so capriciously, but in order to facilitate the perception of the community of origin, which must more and more interest those who accept the theory of evolution." After alluding to the fact that it has been "accepted as an axiom amongst ornithologists that genera must be founded upon structural characters," he states that in the first part of his work he "made use of characters that are not structural in defining some genera," and in other cases "considered so-called structural characters as having only value enough to divide genera into subgeneric groups," while in the second part of the work he has convinced himself "that these so-called structural characters have no generic value at all," and further states that he was obliged to fall back upon "colour or pattern of colour as the only character which indicates near relationship. In my opinion," he continues, "the pattern of the colour in the family or subfamily of *Turdinæ* is a character which is more trustworthy (as showing community of origin), which in fact dates further back than the shape of the wings, tail, and bill." Of the *Sylviinæ*, with 104 species, only 7 genera are recognized, which average 15 species each, the largest genus, *Phylloscopus*, having 25, while the genus *Sylvia* has 23. The subfamily *Turdinæ*, which includes the Bluebirds, Robins, and Stonechats, as well as the typical Thrushes, with 240 species, is divided into 11 genera, averaging 22 each, while some of the larger genera, as *Geocichla*, *Turdus*, and *Merula*, have respectively 40, 48, and 52 species each. While on the subject of genera we may add that the genus *Turdus* includes all the New World Thrushes

*That such will be the case is already evinced by a paper by Mr. L. Stejneger (Proc. U. S. Nat. Mus., 1882, pp. 449 et seq.) entitled "Remarks on the Systematic Arrangement of the American *Turdidæ*" (received since the preparation of this review), in which Mr. Seebohm's genera and generic characters are considered.

except 3 referred to *Mimocichla*, 12 referred to *Catharus*, and 16 included in *Merula*. *Merula* (type *Turdus merula* Linn.) differs from *Turdus* (type *Turdus viscivorus* Linn.) only in coloration, and chiefly through the sexes being in *Merula* unlike in color when adult. The name *Merula* is thus held to be untenable for any species of North American Thrush, nor are any "generic" names other than *Turdus* recognized for any of our species, even (excepting *Planesticus*) in a subgeneric sense.

In regard to subspecies, or geographical races, Mr. Seebohm is eminently sound in theory, but, as we shall have occasion to notice later, is strangely illogical in his manner of designating such forms. "It is also due to the student," he observes, "that some explanation should be given of the way in which conspecies [for this word he acknowledges his indebtedness to Professor Schlegel], or forms between which the difference is only subspecific, are treated in this volume. In the previous volumes of the 'Catalogue of Birds' subspecific forms are recognized. This is an immense stride upon the hard and tight system of previous English ornithologists who refuse to acknowledge the imperfectly segregated species which undoubtedly exist in nature, because forsooth their binomial system of nomenclature does not easily lend itself to their discrimination. The American system, clumsy as it is, has undoubtedly the advantage of being far in advance of the old mode. . . . It is very important that no mistake should be made as to what constitutes a conspecies. Two forms may be very closely allied; but if the difference between them, however small it may be, is constant, and is not attributable to age, sex, or season, the probabilities are that it is a specific difference. On the other hand, if the two forms are so closely allied that they interbreed and produce fertile offspring, which again interbreed, we may draw two inferences—first, that the difference between the two forms is only subspecific, and, second, that between the two extremes must be an infinite gradation of intermediate forms. If the two forms have different areas of geographical distribution (which is usually the case), the intermediate ones will be found where the two areas overlap. If, from any cause, the species should be exterminated in the overlapping areas, and the causes which produced the variations of the two forms still continue, the peculiarities of each become emphasized, until they become so far separated, that should their areas of distribution again overlap they will nevertheless not interbreed, and the two species may be considered to be completely segregated. Under these circumstances, I have preferred to retain the binomial nomenclature for each of the extreme forms, reserving the trinomial name for the intermediate ones, uniting the two specific names by a hyphen, and placing the name of the bird first which it most resembles" (pp. ix, x).

In reference to the above, it may be said that the author's position, as here stated, in respect to subspecific intergrading forms (or conspecific, as our author prefers to term them) is a pretty fair statement of the ground taken ten years since by nearly all our leading American ornithologists, and from which basis they have since worked. It is this view of the matter that has given rise to our system of trinomial nomenclature for subspecific

forms, on which more later when we come to consider our author's peculiar method of using "the trinomial name."

On the subject of nomenclature Mr. Seebohm has a page or two of pertinent remarks which we would gladly quote in full did space permit. In respect to his treatment of specific and subspecific forms, he believes that he "may be considered an ornithological revolutionist by those who have not yet accepted the modern theories of evolution," but at the same time claims to have "adopted conservative principles" upon questions of nomenclature. "The modern attempt," he says, "to carry out the law of priority regardless of consequences, which has introduced so many unknown names into our nomenclature to the detriment of the study of ornithology, has generally been in direct violation of the equally important law of clear definition, which, if it were in its turn carried out in the same unrelenting manner, would further complicate our nomenclature to a perhaps still greater degree. . . . It appears to me to be a great mistake to rake up old and little-used names, and to adopt them because the balance of collateral evidence that they were intended by their authors to be applied to certain species is in their favour. I venture to hope that future ornithologists will retain the old familiar names, even if the law of priority has to be modified to countenance their retention. I have accordingly adopted the law of priority with the following modifications—that names which have been extensively misapplied must be rejected, and names otherwise unobjectionable must be retained, if a majority of ornithological writers have used them, even though they may not be the oldest. . . . Like many other conservative practices, this may not be very logical, but I take it to be an eminently practical solution of the difficulties that surround ornithological nomenclature" (p. xi). These sentiments will doubtless meet with hearty approval on this side of the water from the many who lament the violent upheaval that has, during the last few years, so deeply affected the stability of many long-familiar names in North American ornithology.

Passing now to the body of the work, it may be said in general to be very satisfactorily done. It is modeled on the plan of the previous volumes of the series; there being no formal diagnoses of either the genera or the higher groups, and the distinctive points of specific dissimilarity are generally presented only in the artificial "keys" to the species. Sexual and other phases of plumage are described in detail, followed by a short paragraph on the geographical distribution of the forms in question, with special reference also to the breeding and winter range. The bibliographical citations are reasonably full, and, as we are pleased to see, the date of publication of each work cited is given, as is not the case in most of the other volumes of this invaluable series.

In conclusion we must notice the various ways in which admittedly subspecific forms are treated in respect to nomenclature, and in so doing can but express regret and disappointment, considering the position on the matter of subspecies the author takes in his introductory remarks (in part quoted above), at his, as it seems to us, illogical mode of designating such

forms. On page 14, in speaking of *Sylvia orpheus* and *Sylvia jerdoni*, after referring to the points of difference between the two, and the occurrence of intermediate examples, he says: "We must therefore admit that the difference between the two forms is only a subspecific one, being completely bridged over by examples from intermediate localities." The two forms are then described, and are numbered and stand in the work itself and in the "systematic index" as species in regular standing, the text alone—not the nomenclature or the numeration employed—showing that they are viewed otherwise. They stand "5. *Sylvia orpheus*;" "6. *Sylvia jerdoni*," followed by tables of references and detailed descriptions in the same manner as species of unquestioned standing. Mr. Sharpe's method of treating subspecies is far more reasonable, they being formally recognized as such in his nomenclature, by which method the two forms would stand as follows: "5. *Sylvia orpheus*;" "subspecies *a* *Sylvia jerdoni*" in the body of the work and as "5. *Sylvia orpheus*" and "*a jerdoni*" in the systematic index. To take another example from the many scattered through the volume, at page 16 we have, as a subheading "*Sylvia curruca*, *Sylvia affinis*, and *Sylvia althea*," followed by a paragraph from which we quote the following: "This is an excellent example of a species in the process of breaking up into three species. . . . I prefer to treat them as subspecies, adopting the provisional hypothesis that the intermediate forms are the result of the interbreeding of the different races." Each subspecies is then (very properly) treated separately, but with the status, to all appearances, of accepted species, although in the text they are spoken of respectively as the "European form," the "Siberian form," and the "Himalayan form" of the Lesser Whitethroat. To specify another example, the Rock Thrush (p. 316) is said to have "two extreme forms, between which every possible intermediate form occurs"; yet these two forms stand, so far as regards nomenclature and numeration, on the same footing as fully admitted species. In further illustration of this point we may cite the cases of the *Turdus* "*pallassi*" and *Turdus* "*swainsoni*" groups. The three forms composing each appear to him "to be deserving of subspecific rank," or as "imperfectly segregated species," but each has nomenclaturally the same status in his book as the "fully segregated" species. The Mexican and Central American intergrading forms of *Turdus*, even in some cases where Salvin and Godman have united them as one species, are similarly treated. This seems to be a "hard and tight" adhesion to the binomial system little to be expected from one who goes so far as to admit and even seemingly to advocate a better system.

Toward the close of the volume, however, are a few instances of a peculiar or modified use of trinomial names, as at pages 379 and 380, where we find "*Saxicola leucomelæna-monticola*" and *Saxicola monticola-leucomelæna*," in addition to *Saxicola leucomelæna* and *Saxicola monticola*, to express the relationship of two forms intermediate between the two latter, between which, however, he believes "a large enough series will show not two intermediate forms only, but an infinite series." The intent of this method of designation is explained in the passage from the introduction

already quoted. On page 318, in "*Monticola cyanus solitaria*," is an example of trinomial nomenclature pure and simple, but we fear only by the accidental omission of the hyphen between the second and third names.

We are glad, however, to see even any progressive steps on the part of our English friends to meet the difficulties cast in their way by large series of specimens from wide areas, but fear they do not as yet fully realize their extent, or perceive the simplest and most logical way of giving "a handle to their facts" by means of nomenclature. Wide-ranging species will be found to present, in most cases at least, well-marked local forms, connected insensibly by forms less differentiated from the intermediate areas, as soon as large series of specimens shall be brought together from over a wide area—in other words, that many forms which have for a long time passed current as species will be found to insensibly intergrade. In view of this it seems best to let the earliest name applied to any form of a given species stand for the whole group, and indicate such local races as seem entitled to recognition in nomenclature by a third term. Species would thus be distinguished by a binomial title and subspecies by a trinomial one, simply by dropping, by common consent, and for the sake of simplicity and conciseness, the understood connective, "subsp." or "var."

By these remarks on the nomenclature of the volume we by no means intend any serious disparagement of Mr. Seebohm's work, or to set ourselves up as a lawgiver in such matters; on the contrary we admire most heartily his thorough treatment of the subject in hand and the philosophic spirit in which he has approached his task. The general student of ornithology, we are sure, cannot be too grateful for the excellent monograph he has placed at their service.

In volume VI Mr. Sharpe treats of the "first portion of the large family *Timeliidæ* or Babbling Thrushes, a group which is largely represented in the Old World, but contains only a few members in the American continents. Five subfamilies have been described in the present volume, viz: the Bulbuls, the Wrens, the Mocking Thrushes, the Solitaires, and the Bower-birds. The total number of species enumerated is 407; and of these the Museum possesses 315" (p. vi). In style of treatment the volume agrees closely with the first four volumes of the series by the same author. The Bulbuls (subfamily *Brachypodinæ*), all Old World types, number 175 species, arranged in 27 genera, the largest genus, *Pycnonotus*, including 36 species. The subfamily *Troglodytinæ* next follows, and contains 18 genera and 155 species, 113 of which are American. *Thryothorus* has 32 species, *Thryophilus* 17, and *Campylorhynchus* 22. Of true Wrens only one genus, *Anorthura*, is common to both the Old and the New World. The Dippers (genus *Cinclus*), however, are associated with the Wrens as the last genus of the subfamily. The New World subfamily *Miminæ*, or Mocking Thrushes, numbers 12 genera and 47 species. The small American subfamily *Myiadectinæ*, or Solitaires, numbers 3 genera and 14 species. The small subfamily *Ptilonorhynchinæ* (Bower-birds) contains 6 genera and 15 species, confined to Australia and the Papuan group of islands.

In a few instances Mr. Sharpe admits subspecies, as under *Troglodytes domestica*, where *parkmani*, *aztecus*, and *insularis* are thus treated, but such cases are exceptional; the local races of *Thryothorus ludovicianus* and *T. bewicki* are each accorded full specific rank, although spoken of as "forms" of the species to which they are referred as races by American writers. His criterion for subspecies is therefore, to say the least, obscure. *Harporhynchus rufus longirostris* is not only raised to the rank of a species, but is separated from *rufus* by two intervening species, and is not even spoken of as having a near relationship to *H. rufus*. Finally on this point it may be sufficient to state that in the "subfamilies" *Troglodytinæ* and *Miminæ* no subspecies are admitted outside of the genus *Troglodytes*, with the single exception of a West Indian form of *Mimus*. As in former volumes, there is, as a rule, no direct comparison between closely allied species further than that very inadequately furnished by the "key" to the species standing at the head of each genus. We note a few changes of names, among them *Campylorhynchus couesi* for what has commonly been called *C. brunneicapillus*, the latter name belonging properly to *C. affinis* auct., for which it is here substituted.

In respect to the classification followed in these volumes, Mr. Sharpe states that it is based on that of the late Professor Sundevall. While he adopts his higher divisions ("cohorts") of the Passeres, the arrangement of the lesser groups bears little resemblance to the confessedly artificial arrangement devised by Sundevall. While in the main Mr. Sharpe brings the minor groups into more natural relationship, his relegation of the Dippers (family *Cinclidæ* auct.) to the position of a genus in the subfamily of Wrens is, to say the least, novel if not unwarranted, while the *Ptilorhynchinæ* and some other groups find themselves among decidedly new associates.

The preface to volume VI (dated December, 1881) states: "It is hoped that the succeeding volume (which will conclude the *Timeliidæ*, and which has made considerable progress) will appear within the space of a twelve-month, as also that, with additional extraneous help, the work generally will make more rapid progress than has hitherto been possible." That such will be the case is earnestly to be hoped, so great is the value of the work to all general students of ornithology.—J. A. A.

BIRDS AND INSECTS.*—Our best authority upon the insect food of birds has continued his observations upon the subject. Professor Forbes set himself to answer the three following questions: 1. Do birds originate any oscillations among the species of insects upon which they feed? 2. Do they prevent or restrain any oscillations of insects now noxious, or capable of becoming so if permitted to increase more freely? 3. Do they do anything to reduce existing oscillations of injurious insects? 4. Do they sometimes vary their food habits so far as to neglect their more usual food

* The Regulative Action of Birds upon Insect Oscillations. By S. A. Forbes. Bull. No. 6, Illinois State Laboratory of Nat. Hist., Dec. 1882, pp. 1-31.

and take extraordinary numbers of those species which, for any reason, become superabundant for awhile? The present paper deals with the last of these questions, showing to what extent birds depart from their usual practices when confronted with an uprising of some insect species, and how they concentrate for its suppression. The paper is very carefully worked up to show how effectively birds may restore a disturbed balance of life.

An orchard of forty-five acres was selected as the field of operations. It had been infested with canker worms for about six years. "As a result of their depredations, a considerable part of the orchard had the appearance, from a little distance, of having been ruined by fire. Closer examination of the trees most affected showed that the branches, stripped of almost every vestige of green, were festooned with the webbing left by the worms. To the webs the withered remnants of the leaves adhered as they fell, the very petioles having been gnawed off at the twigs. Not one per cent of the trees were uninjured, and these were invariably on the outer part of the orchard. Those which had been attacked several years in succession were killed; and there was a large area in the midst of the orchard from which such trees had been removed. One did not need to enter the enclosure to learn that the birds were present in extraordinary numbers and variety. From every part of it arose a chorus of song more varied than I had ever heard in any similar area at that season of the year." In this place, May 24, 1881, 54 birds of 24 species were taken, and 7 other species were noted. At a second visit, May 20, 1882, 92 birds of 31 species were shot, and 4 other species were seen.

This was the material upon which Professor Forbes worked, the exact examination of the stomachs being the basis of the paper. The whole subject is carefully discussed, three facts standing out very clearly as the results of these investigations.

"1. Birds of the most varied character and habits, migrant and resident, from the tiny wren to the blue-jay, birds of the forest, garden and meadow, those of arboreal and those of terrestrial habit, were certainly either attracted or detained here by the bountiful supply of insect food, and were feeding freely upon the species most abundant. That 35 per cent of the food of all the birds congregated in this orchard should have consisted of a single species of insect, is a fact so extraordinary that its meaning cannot be mistaken. Whatever power the birds of this vicinity possessed as checks upon destructive eruptions of insect life, was being largely exerted here to restore the broken balance of organic nature. And while looking for their influence over one insect outbreak we stumbled upon two others, less marked, perhaps incipient, but evident enough to express themselves clearly in the changed food ratios of the birds.

"2. The comparisons made show plainly that the reflex effect of this concentration on two or three unusually numerous insects was so widely distributed over the ordinary elements of their food that no special chance was given for the rise of new fluctuations among the species commonly eaten. That is to say, the abnormal pressure put upon the canker worm

and vine chafer was compensated by a general diminution of the ratios of all the other elements, and not by the neglect of one or two alone. If the latter had been the case, the criticism might easily have been made that the birds, in helping to reduce one oscillation, were setting others on foot.

"3. The fact that, with the exception of the indigo bird, the species whose records in the orchard were compared with those made elsewhere, had eaten in the former situation as many caterpillars other than canker worms as usual, simply adding their canker worm ratios to those of other caterpillars, goes to show that these insects are favorites with a majority of birds."

We notice the unexpected fact respecting *Fringillidæ*, that only 7 per cent of the food of 47 individuals of this "seed-eating" family, consisted of seeds, insects making up all but 2 per cent of the remainder. The canker worms alone made 40 per cent. But in this case it must be remembered that the circumstances were highly exceptional.

We trust Professor Forbes will not desist from his good work. Such exact data as these are just what is required for the solution of the general problem which is offered by the relations of the bird-world to agriculture:—E. C.

ECONOMIC RELATIONS OF BIRDS AGAIN.*—Upon the heels of Prof. Forbes's paper, but since the foregoing notice was penned (else the two contributions to the same subject might have been profitably considered together), comes the very elaborate result of Prof. King's examinations of the food of birds in its bearing upon our agricultural interests. The question,—one of great economic importance,—seems to be only of late brought forward with sufficient prominence; and it is evident from what these two investigators have accomplished, that our ornithologists have hitherto taken it up, if at all, only after methods entirely inadequate to its solution. Observations have usually been no more than incidental to our study of the habits of birds, instead of being sufficiently prolonged, exact and systematic to yield sound results. Prof. King's field-work, we are informed, was commenced in 1873, and is apparently only just concluded—his attention during this long period being steadily and rigidly directed to discovering what and how much food Wisconsin birds eat, with the view of classifying these birds in certain categories—primarily those beneficial to or injurious to, man in economic relations. This is certainly a worthy devotion, undertaken in truly scientific spirit, and carried out with an earnest purpose. It should go far toward accomplishing the desired result,—though we fear the problem is too intricate, involving too many unknown quantities, to be solved perfectly by never so many tabular statements of contents of birds' stomachs. We suspect that the general equation reduced to its simplest practical terms will prove in the end to be, that the fewer birds of all kinds killed the better for us.

* Economic Relations of Wisconsin Birds. By F. H. King. Wisconsin Geological Survey, Vol. I, chap. xi, pp. 441-610, figg. 103-144. Roy. 8vo.

"The facts recorded in this report were obtained from an examination of the contents of the stomachs of over 1800 birds, 1608 of which contributed results which have been incorporated in the report." The contents of one-half these stomachs were examined fresh, with the hand-lens, the rest more leisurely and in greater detail after transference to alcohol. "But had it been possible," says the author very truly, "to identify specifically the 7663 insects, etc., taken from the stomachs of these 1608 birds, this would have been by far the smallest part of the task set, for then it would be required to command a full and broad knowledge of the economic relations of the insects eaten. But with the difficulty solved, we must recognize still another, of greater magnitude and higher degree. Because of these great difficulties inherent in the task itself, and the ample grounds they present for difference of opinion in regard to final conclusions, it has seemed very desirable that there should be presented some of those general considerations which have served as guides to the classification adopted."

These considerations are therefore presented, and very elaborately, in the Introduction, which occupies some 30 pages. Bird-food, considered in its two broad categories of vegetal and animal, is farther ranged under the two leading classes of that, the consumption of which is on the whole (1) a service, or (2) an injury, to man. Beneficial services of birds are stated and discussed under the following propositions: A bird is beneficial when it feeds upon injurious (1) plants, (2) mammals, (3) birds, (4) reptiles, (5) insects [the real *crux* of the problem], (6) mollusks, (7) crustaceans and worms, (8) carrion. (We state it very broadly and tersely—the author's own propositions are elaborated and qualified in various ways.) On the other hand, a bird is injurious under nearly the same number of contrary conditions; as when (1) it destroys or injures useful plants; (2) preys on shrews, moles, and bats; (3) upon beneficial birds; (4) upon lizards and small snakes; (5) upon frogs, toads, and salamanders; (6) upon the parasites of noxious animals, especially noxious insects; (7) upon beneficial predaceous insects, spiders, and myriapods; (8) upon carrion insects; (9) upon beneficial worms. These numerous points receive due attention.

"When it is proposed to utilize birds as insect destroyers, to increase the abundance of certain species and to exterminate or hold in check others, to encourage the breeding of certain birds in given places and to prevent others from doing so; or, when it is proposed to introduce into a country a foreign species, other questions than those of food simply must be considered." Some of the more important of these are given by the author as: (1) The relations held by the bird to different industries; (2) its food and habits in different localities; (3) during different seasons; (4) when young and mature; (5) when and how long the bird is in a given locality; (6) its nesting place; (7) its other haunts; (8) its hours of feeding; (9) methods of obtaining food; (10) situations in which its food is obtained; (11) whether or not the bird does an important work which other birds are not fitted to do; (12) size and activity of the bird; (13) its gregariousness or the reverse; (14) its dexterity upon the wing; (15) its

general disposition; (16) its value as food to man; (17) its furnishing or not a habitat for troublesome parasitic entozoa; (18) its fecundity. The discussion of these various points leaves one in no doubt whatever that, whether or not the author has solved the problem, he has certainly sketched many of its factors, and mapped out a proper course of study.

Among "other considerations" with which the introduction continues are: (1) the changing habits of birds; (2) can they ever become abundant in thickly settled districts? (3) what birds, if left to themselves, are likely to become most abundant as the country grows older? (4) some birds may be injurious to a locality which they seldom or never visit (a curious fact — *e. g.*, destruction, during the migration, of useful birds of prey); (5) do birds of prey perform a necessary work by holding in check certain birds and noxious animals? (6) parasitism among birds; (7) the scientific, educational and æsthetic value of birds.

The Introduction closes with "a Temporary Classification of Wisconsin Birds on an economic basis," as follows:—

Group I. Birds whose habits, so far as they are known, render them, on the whole, beneficial.

(a) Birds whose known habits render them beneficial at all times.

(b) Birds which are known to be to some extent injurious, but whose known services exceed their known injuries.

(c) Birds whose flesh is valuable for food, and whose present abundance and slight usefulness as insect destroyers make it proper to permit their destruction as game.

Group II. Birds whose habits, so far as they are known, make it doubtful whether they are, on the whole, beneficial or injurious. (With three categories, *a, b, c.*)

Group III. Birds whose habits, so far as they are known, render them, on the whole, injurious.

(a) Birds whose known habits render them injurious at all times.

(b) Birds which are known to be to some extent beneficial, but whose known injuries exceed their known services.

It would certainly appear that most birds fall in group I, category (*a*) or (*b*) — happily for us and them!

A curious question is raised, How shall a bird's food be expressed numerically in terms of debit and credit? because neither relative volumes nor relative weights of beneficial or detrimental food-elements can express the true economic relations of the bird, any more than a peck of plums can be compared with a peck of curculios — any more than the destruction of 3000 phylloxera can be set against that of one coral-winged grass-hopper, as it would be if bulk for bulk were gauged. The author's method of meeting this difficulty, arising from the fact that we have no standard of insect values, is novel and ingenious, to say the least. It consists essentially in the use of heavy black *lines* of different lengths, showing graphically, not numerically, the ratios of animal or vegetal foods, of the several items of each, and particularly the ratios of "beneficial" and "detrimental" food-elements, and those undetermined in these respects.

The body of the report is primarily of the nature of an ordinary "local list" for the State of Wisconsin, giving in systematic order 295 species; nor must the claims of the paper in this regard be entirely overshadowed by the importance of its main object. Every bird is referred to one or another of the several "Groups" and subgroups above mentioned. The "tabular summaries of economic relations," expressed in the peculiar manner above noted, are given for such species in sets, according to families. The report is well-written, giving in many cases extended biographies, aside from those points which in each case of course engage the author's special attention. Besides detailed results of his own observations, statements of many other authors respecting the food of our birds is condensed and summarized. The numerous woodcuts are chiefly taken from Baird, Brewer, and Ridgway. The flavor of the author's personality is appreciable, as we were sure we should find it to be, after reading in the preface what Prof. King has to say of his "sojourn for six months in the sunshine of a warm heart;" and if we had the heart to pass any ungracious criticism upon so laborious, meritorious and interesting a report, the printer rather than the author would be our victim.—E. C.

REPORT ON THE BIRDS OF OHIO.*—This long-deferred work reaches us at length in the form of a treatise on the ornithology of the State so extensive and so systematic that the time its preparation has occupied seems justified if not absolutely required. The inside history of the publication repeats that of most scientific work which struggles for existence in the meshes of official red-tape. It was begun in 1873, the author being given a year in which to complete it. In 1874, he was ready with an annotated and descriptive catalogue of his birds, which might have made perhaps pp. 100 of print. This was rewritten and extended in 1875; and again, in 1877-'8, with addition of the synonymatic and bibliographical matter, and the appendix. As appears by the date of the letter of transmittal, printing began in November, 1879, and continued to p. 352, January, 1880, when it was stopped till December, 1880, when it was resumed, with more or less prolonged interruptions until completed in the summer of 1881. Then the sheets appear to have been stored for a year or more before actual publication, which was late in 1882. The bird-matter appears in two forms—as a part of the whole volume, and as a small edition of separate extras—the latter; however, fortunately without repagination or any alteration whatever.

Though about a year and a half behindhand, and consequently without the finishing touches which the author's careful attention to the progress of the science during that period would doubtless have led him to give had circumstances permitted, Dr. Wheaton's report must at once take place at the head of State Faunas, so far as ornithology is concerned. It repre-

* Report on the Birds of Ohio. By J. M. Wheaton, M. D. Report of the Geological Survey of Ohio, Vol. IV, pt. 1, pp. 188-628. Columbus, O. Nevins & Myers, State Printers. 8vo. 1882.

sents a large amount of original research, extending over nearly a decade, diligently and intelligently applied to the construction of a systematic treatise which possesses the necessary qualities of a good working handbook of the subject. Indeed we recall no other "local fauna" of equal extent, which rivals this one in methodical treatment. Ohioans have here, in fact, a correct history and description of their 300 birds, systematically arranged and classified, with diagnoses of the genera and higher groups, a considerable synonymy of each species with special reference to state literature, and a local bibliography—the whole forming a work of that useful kind called "a manual," and bearing the weight of competent authority. Since the death of Dr. Kirtland, we doubt that any one is better entitled to speak of Ohioan birds than Dr. Wheaton, who appears to have himself collected, in the vicinity of Columbus, more than two-thirds of the species he treats, and to have admitted none that he has not personally identified, except upon unimpeachable authority. His own description of his book, albeit perhaps too modest, may be transcribed:—

"In the following pages I have made free use of the writings of several authorities. The descriptions of species are almost without exception or alteration from Dr. Elliott Coues' Key to North American Birds. The keys to the genera are from Prof. D. S. Jordan's Manual of Vertebrates, the definitions of the higher groups are by Dr. Coues, and taken from the introductory chapter of North American Birds. The nomenclature adopted is that of Dr. Coues in his Check List of North American Birds [1874], with such modifications as changes, made since its publication, require. This is followed by references to all writers, whether general or local, who have mentioned that species as Ohioan. This is followed in most cases by such synonyms as will enable changes in the nomenclature to be traced. Following the description I give, as briefly as possible, an account of its general and breeding habits, together with such biographical observations as seem to me interesting or valuable. In the appendix I have inserted a list of the birds, with the dates of their appearance and disappearance, as observed by me in this vicinity; a list of the birds identified by me in my garden in this city; a bibliography of Ohio Ornithology, and a glossary of such scientific words as require definition" (p. 197). To which we may add that the work opens with a consideration of the physical geography of Ohio in its relation to the bird-fauna of the state; and that the appendix includes, besides late additions to and corrections of, the main text, an essay "on the relation between latitude and the pattern of coloration in Ohio birds," which will be found to contain some curious and novel observations.

"The list gives 292 species, 4 of which are represented by additional varieties, and 2 introduced species, making a total of 298 species and varieties. Of these 6 are considered accidental" (p. 570).

We have said enough to certify that this volume of some 450 pages is no slight nor uncertain addition to our ornithological literature. It is easily first in its special field, and takes its permanent place among the more comprehensive treatises on North American birds. Aside from the more

technical portions, the text is well written, and possesses the attraction of being mostly new and original. The mechanical execution of the work reminds us to say that "official" printing—paper, typography and binding—is generally so bad, that we wish we could instance the present case as an exception to the rule, though it might easily be worse than it is.

Dr. Wheaton is one of the pioneers in Ohioan ornithology, his publications upon the subject extending over a period of more than twenty years; and the Survey is certainly to be congratulated on the result of not intrusting the report to other hands, as we believe was at one time contemplated.—E. C.

ILLUSTRATIONS OF THE NESTS AND EGGS OF THE BIRDS OF OHIO.—We are always glad to record the continuation of this great work, the merits of which we have already sufficiently indicated. The last number which has reached us is a double one, being Parts 14 and 15, October 1882 and January 1883, published together about January 1, raising the text to p. 154, and the illustrations to pl. xlv. Pl. xl, representing *Icterus spurius*, is very characteristic as well as artistic; pl. xli, *Petrochelidon lunifrons*, with the bird itself protruding from the nose of the bottle; pl. xlii, *Thryothorus bewicki*, very prettily executed, and probably the first representation of the nest and eggs of this bird ever published; pl. xliii, *Astragalinus tristis*, in the crotch of a rank thistle; pl. xlv, *Melanerpes erythrocephalus*, the wood sawn to show the shape of the excavation, with the eggs at the bottom. Plate xlv introduces a new feature which was sure to come before the end, in cases where no nest is constructed, or the nest is too bulky to be represented, consisting of the eggs, three each, of *Tringoides macularius*, fig. 1, *Egialites vociferus*, fig. 2, *Asio accipitrinus*, fig. 3, and *Corvus frugivorus*, fig. 4.—E. C.

BROWN'S BIRDS OF PORTLAND.*—This excellent local list—desirably supplementing those of Maine birds by Holmes, 1861; Verrill and Boardman, 1862; Hitchcock, 1864; Hamlin, 1865;—is stated to be prepared from notes systematically taken during the past twelve years, and to contain the names of scarcely any species which have not passed under the author's personal observation. Its reliability is therefore evident. The number of species given is 250, of which *Passer domesticus* and *Coturnix communis* are artificial introductions. The annotations, though not extensive, are to the point and seem judiciously adapted to convey a fair idea of the part each species plays in the composition of the Avifauna. This is really a more important matter than the mere enumeration of names, however nearly complete; for about half of the birds actually occurring in a given locality stamp the facies of its bird-life more clearly and characteristically than the other moiety of rare transients, irregular visitants, and "accidents." We could wish that this matter had been brought out

*A Catalogue of the Birds known to occur in the vicinity of Portland, Me. [etc.]. By Nathan Clifford Brown. Proc. Portland Soc. Nat. Hist., Dec. 4, 1882. Also separate, Portland, 8vo, pp. 37.

even more clearly by summaries at the end of the paper, in which tables it is always desirable to present birds in their several categories of permanent residents, summer visitants, spring and fall migrants, winter visitants, and the "irregular" or stragglers.

We note, as of interest in considering this locality: *Poliioptila cærulea*, *Oporornis agilis*, *Coccygus americanus*, *Ulula cinerea*, *Falco islandicus*, *Falco peregrinus*, *Cathartes aura*, *Herodias egretta*, *Florida cærulea*, *Actodromas bairdi*, *Ancylochilus subarquatus*, *Recurvirostra americana*, *Rallus elegans*, *R. longirostris crepitans*, and other rarities; and not only on account of their intrinsic interest, but as showing that the locality must have been pretty carefully gone over.

The article is fairly well printed, but, aside from typographical errors, we are surprised that Mr. Brown should have overlooked the peculiar orthography to be found here and there, which may, however, result from "authority" or personal predilection. We do not understand the use of the term *Spizella montana* (Forst.) Ridg. Forster certainly never described or named our Tree Sparrow, properly speaking—he simply mistook it for the European *Passer montana*; and no nomenclatural availability is conferred by the fact that the two birds belong to different modern genera.

We wish that the author had not deemed it advisable to suppress the original pagination of the article as a part of the Proceedings, and the number of the volume of the latter in which it appeared; for, as the pamphlet stands, we have no means of properly citing its original edition.—E. C.

RIDGWAY ON THE TREE-CREEPERS.*—Mr. Ridgway states that after a careful consideration of much material and all that has been written on the subject, he has been "forced to the conclusion that the *C. mexicana* itself cannot stand even as a race, or else it becomes necessary to recognize a larger number of races than have [has] usually been claimed for the species. In other words, it is simply a question of whether geographical variations of form and color are to be completely ignored as a factor in the genesis of species, or whether they should receive due consideration in connection with this important subject." Accepting the latter view as the more scientific one he proceeds to characterize 7 races as susceptible of definition, 3 of which are for the first time named. These races are as follows: 1. *familiaris* Linn., Scandinavia; 2. ? *costæ* Bailly, Central Europe; 3. *britannica* subs. nov., British Islands; 4. *rufa* Bartr., Eastern North America; 5. *montana* subs. nov., Middle Province of North America; 6. *occidentalis* subs. nov., Pacific coast of North America; 7. *mexicana* Gloger, Guatemala and Southern Mexico.—J. A. A.

*Critical Remarks on the Tree-creepers (*Certhia*) of Europe and North America. By Robert Ridgway. Proc. U. S. Nat. Mus., 1882, pp. 111-116. July 8, 1882.

RIDGWAY'S REVIEW OF THE GENUS CENTURUS.*—This revision is based on an examination of 227 specimens, representing 12 of the 14 forms considered as sufficiently distinct for recognition, of which "not more than six, or less than one-half, can be said to be perfectly isolated, or to possess the requirements of perfectly distinct species." "The so-called genus *Centurus*," says Mr. Ridgway, "is scarcely more than an artificial division of *Melanerpes*, distinguished from the typical section of that genus chiefly, if not only, by a different system of coloration, which characterizes most of the species." Even in this respect the intergradation is so complete that certain species may be referred with almost equal propriety to either group. *C. terricolor* is considered as doubtfully distinct from *C. tricolor*. To *C. aurifrons* are referred as races *santacruzii* Bon., *dubius* Cabot, and *hoffmanni* Cabanis. Each form recognized is described in detail, and the whole subject is treated with Mr. Ridgway's usual care and completeness. —J. A. A.

LAWRENCE ON NEW SPECIES OF BIRDS.†—In the first paper here mentioned Mr. Lawrence describes a new subspecies of *Loxigilla* (*L. portoricensis* var. *grandis*) from the Island of St. Christopher, W. I., collected by Mr. Ober. It differs from *L. portoricensis* in larger size and in some points of coloration. In the second paper he describes *Chætura gaumeri*, from Yucatan, allied to *C. vauxi*. In the same paper he has notes on *Pyrranga roseigularis* Cabot, previously known from the single type specimen, and describes the female. He also describes the female of his *Centurus rubriventris*, and maintains its distinctness from *C. tricolor*, to which it has been referred. The species described in the third paper are *Leptoptila fulviventris* and *Formicarius pallidus*, both from Yucatan. In the fourth paper is described *Hemiprocne minor*, from New Granada. —J. A. A.

FREKE ON NORTH AMERICAN BIRDS CROSSING THE ATLANTIC.‡—This paper is based on the author's "Comparative Catalogue of Birds found in Europe and North America," published in 1880 (reviewed in this Bulletin,

* A Review of the genus *Centurus*, Swainson. By Robert Ridgway. Proc. U. S. Nat. Mus., 1881, pp. 93-119. June 2, 1881.

† 1. Description of a New Subspecies of *Loxigilla* from the Island of St. Christopher, West Indies. By George N. Lawrence. Proc. U. S. Nat. Mus., 1881, pp. 204, 205. Nov. 18, 1881.

2. Description of a New Species of Swift of the genus *Chætura*, with Notes on two other little known Birds. By George N. Lawrence. Ann. New York Acad. Sci., Vol. II, No. 8, pp. 247, 248. March, 1882.

3. Descriptions of New Species of Birds from Yucatan, of the Families Columbidae and Formicariidae. By George N. Lawrence. Ann. New York Acad. Sci., II, No. 9, pp. — —, 1882.

4. Description of a New Species of Bird of the Family Cypselidae. By George N. Lawrence. Ann. New York Acad. Sci., II, No. 11, p. —, 1882.

‡ North American Birds crossing the Atlantic. By Percy Evans Freke. 8vo, pp. 11. From Scientific Proc. Roy. Dublin Society, Vol. III, 1881.

Vol. V, pp. 173, 174), of which it may be regarded as in part a summary, as also a most valuable résumé of the general subject of North American birds occurring in Europe. The species are divided into the three categories of "Land Birds," "Wading Birds," and "Swimming Birds," which are each separately tabulated to show the number of occurrences of each species in Europe, the countries where they were observed, and the month in which they were taken. The number of species is 69; the total number of occurrences, 494. The most decided result obtained by this analysis is the remarkable preponderance in the number of birds which visit Europe from North America during the autumnal migration as compared with the vernal migration, the ratio being apparently as 168 to 61. This leads the author very naturally to the belief that North American birds, in reaching Europe, are borne irresistably eastward by the strong westerly winds which prevail at the periods of migration, and that of the large number blown out of their course and unable to return but a few only survive to reach the European shores. The preponderance of such arrivals in autumn is attributed to the large proportion of young birds then migrating, which are less able to resist adverse currents than are the older and stronger.—J. A. A.

FREKE ON EUROPEAN BIRDS OBSERVED IN NORTH AMERICA.*—The total number of species included in the list is 56, of which 9 are regarded as artificially introduced, leaving 47 as wanderers from the Old World. Of these latter 13 are Land Birds, 17 are Waders, and an equal number are Swimmers. Of the whole number (47) only 12 have been recorded from the Eastern United States, 20 have been found only in Greenland, while 9 others have occurred only on the Pacific Coast (chiefly in Alaska). *Saxicola ananthe*, *Motacilla flava*, and five other species of Old World birds found more or less frequently in Greenland are excluded from the list as being on this account properly North American. On the other hand, *Tringa subarquata* and *Puffinus anglorum* are included among the stragglers from Europe. The list seems to have been most carefully worked out and may deservedly stand as a companion piece to Mr. J. J. Dalglish's "List of Occurrences of North American Birds in Europe," published in volume V of this Bulletin. The number of American visitors to Europe recorded by Mr. Dalglish, it may be remembered, is 67, or 20 more than appear to have visited us from the Old World.—J. A. A.

CANADIAN BIRDS—ERRATA.—[In the January number of the Bulletin (Vol. VIII, p. 57) is a review of a paper on birds observed near Ottawa, Canada, by Geo. R. White and W. L. Scott, in which reference is made to several astonishing announcements of species taken. In justice to the authors of the paper it is but fair to say that a list of "errata" were received by the editors of the Bulletin from Mr. Scott several days before

*On European Birds observed in North America. By Percy E. Freke. Zoologist, Sept., 1881. Also separate, pp. 1-14.

the January Bulletin was issued, but too late to be inserted in that number. We may further state that we are informed that the authors were away on a collecting trip when the paper was printed, and had no opportunity to correct the proof-sheets. The list of errata sent by Mr. Scott are here appended.—EDD.]

List of *Errata*.—Omit Nos. 12, 132, and 329. For "34 *P. rufescens*, Chestnut-backed," read "33 *P. hudsonius*, Hudsonian." After No. 337 read "One specimen seen, not shot." No. 406, for "Brown" read "Brant." For No. "470 *P. Jamaicensis*, Black," read "467 *R. Virginianus*, Virginian Rail." No. 507, for "Buffalo" read "Buffle." For "555 *L. Franklinii*," read "556 *L. Philadelphia*"; the English name is correct.

Nos. 162 and 398 are doubtful, both specimens having been mislaid.

In the "Report" itself the following corrections have to be made: Page 27, line 6, for "Iwelin" read "Gmelin"; l. 10, for "*Columbus*" read "*Colymbus*"; l. 13, for "*Haliaetus*" read "*Haliaëtus*"; l. 25, for "*Sayomis*" read "*Sayornis*." P. 28, l. 5, for "*H. cinereous*" read "*H. rufus*."—W. L. SCOTT.

MINOR ORNITHOLOGICAL PUBLICATIONS.—"Forest and Stream" for 1882 (Vols. XVIII and XIX) contains the following notes and articles (Nos., 190-235):

190. *Birds observed in Central Dakota. During the Summer of 1881.* By W. L. Abbott. *Forest and Stream*, XVII, No. 24, p. 486, Jan. 12, 1882.—A briefly annotated list of 81 species, observed "on a trip through central Dakota."

191. *Questions about Wild Turkeys.* By W. M. Waite. *Ibid.*, XVII, No. 25, p. 487, Jan. 19, 1882.—Remarks on "two distinct kinds [of Turkey], with a cross between the two, inhabiting one locality."

192. *Habits of Woodpeckers.* *Ibid.*, XVII, No. 26, p. 507, Jan. 26.—Two communications, signed respectively "Byrne" and "S. H. M.", chiefly on Woodpeckers storing food for winter use.

193. *The Road-runner.* By J. E. Wadham. *Ibid.* XVIII, No. 2, p. 27, Feb. 9, 1882.—On the habits of *Geococcyx californianus*.

194. *Habits of Cormorants* [*Phalacrocorax "mexicanus."*] By "Byrne." *Ibid.*, XVIII, No. 2, p. 27, Feb. 9, 1882.

195. *The Fauna of Spirit Lake [Iowa].* By A. A. Mosher. *Ibid.*, XVIII, No. 4, p. 66, Feb. 23, 1882.—Chiefly about birds.

196. [*Habits of*] *Red-headed Woodpeckers.* By H. W. Merrill. *Ibid.*, XVIII, No. 5, p. 66, Feb. 23, 1882.

197. *Recapture of the Australian Crested Parroquet at Sing Sing, N. Y.* By A. K. Fisher, M. D. *Ibid.*, XVIII, No. 4, p. 67, Feb. 23, 1883.—An escaped example of *Callopsittacus novæ-hollandiæ*.

198. *Crafty Feathered Fishers.* By J. C. Hughes. *Ibid.*, XVIII, No. 5, pp. 85, 86, March 2, 1882.—Capture of fish by the Bald Eagle (*Haliaëtus leucocephalus*) and the Fish Crow (*Corvus caurinus*).

199. *English Widgeon on the New Jersey Coast.* By "Homo." *Ibid.*, XVIII, No. 5, p. 86, March 2, 1882.—"Several" taken during "the

past two or three years" by baymen in Tuckerton and Big Bays, near Little Egg Harbor Inlet.

200. *Screech Owl* [*Scops asio*] in Confinement. *Ibid.*, XVIII, No. 6, pp. 106, 107, March 9, 1882.

201. *Shore Birds in Grenada*. By "Certhiola." *Ibid.*, XVIII, No. 7, p. 127, March 16, 1882.—Dates of arrival of 11 species.

202. *Ornithological Nomenclature*. By Everett Smith. *Ibid.*, XVIII, No. 8, p. 145, March 23, 1882.—An earnest protest against various recent changes and innovations in the nomenclature of North American birds.

203. *The New Check List*. By Elliott Coues. *Ibid.*, XVIII, No. 9, pp. 166, 167, March 30, 1882.—Announcing the new edition of the author's Check List as nearly ready for publication and giving an extract of several paragraphs from the "Introduction," anent the article last above-cited.

204. *Winter Notes. The Winter of 1881-2 in Lewis County, Northern New York*. By C. Hart Merriam, M. D. *Ibid.*, XVIII, No. 11, p. 207, April 13, 1882.—An article, nearly a page in length, chiefly ornithological.

205. *Early Birds in Maine*. By Everett Smith. *Ibid.*, XVIII, No. 11, p. 268, April 13, 1882.

206. *Red-headed Woodpeckers in Maine*. By Everett Smith. *Ibid.*, XVIII, No. 11, p. 208, April 13, 1882.—Their recent appearance in Maine.

207. *Spring Notes*. *Ibid.*, XVIII, No. 14, p. 266, May 4, 1882.—Three short articles relating respectively to (1) Kings County, Nova Scotia (by J. M. J[onès].), (2) Taunton, Mass. (by J. C. Cahoon), and (3) Deering, Me. (by J. E. M.), noting the arrival of birds at these localities.

208. *Cardinal Redbird winters in New York*. By Louis A. Zerega. *Ibid.*, XVIII, No. 15, p. 286, May 11, 1882.—The *Cardinalis virginiana* stated to be a permanent resident in Central Park, New York City.

209. *Spring Notes*. *Ibid.*, XVIII, No. 16, p. 305, May 18, 1882.—Four short papers relating to (1) Philadelphia, signed "Homo"; (2) Portland, Conn., by Jno. H. Sage; (3) Bay Ridge, L. I., by A. L. Townsend; (4) Cleveland, O., by Seym. R. Ingersoll.

210. *Odd Nesting Places*. By Col. Culver. *Ibid.*, XVIII, No. 16, p. 305, May 18, 1882.—Of *Cotile riparia*, *Coccygus erythrophthalmus*, *Turdus migratorius*, and *Melospiza meloda*.

211. *The Music of Nature. Our Wood Thrushes*. By B. Horsford. *Ibid.*, XVIII, No. 17, p. 326, May 25, 1882.—Description of the birds and their songs, with an attempt to indicate their notes by use of the musical scale.

212. *Birds and Electric Lights*. By W. N. B[yers?] *Ibid.*, XVIII, No. 19, p. 366, June 8.—Destruction of large numbers of birds by flying against the framework of electric light towers in Denver, Col.

213. *Remarkable Flight of Warblers*. By F. C. Browne. *Ibid.*, XVIII, No. 20, p. 386, June 15, 1882.—In Eastern Massachusetts, May 21 and succeeding days.

214. *Some Oölogical Notions*. By Lew Vanderpoel. *Ibid.*, XVIII, No. 21, p. 407, June 22, 1882.—Notes, among other things, that the eggs of the same species are almost invariably larger in the North than in the South,

and adds: "Perhaps the late Dr. Brewer's theory in this respect is sufficiently absolute that we might safely accept it as a law." *Query*: Where is this "theory" announced? See in this connection Bull. Nutt. Orn. Club, Vol. I. 1876, pp. 74, 75.

215. *Arrival of Spring Birds* [at Bay Ridge, L. I.]. By W. S. L. *Ibid.*, XVIII, No. 22, p. 427, June 29, 1882.

216. *A Mallard's Strange Nesting Place*. By Burr H. Polk. *Ibid.*, XVIII, No. 22, p. 427. — On the open prairie, in eastern Colorado.

217. *The Nighthawk in Cities*. By Louis A. Zerega. *Ibid.*, XVIII, No. 24, p. 467, July 13, 1882. — On the nesting of *Chordeiles popetue* on the flat rooftops of houses.

218. *Swallow-tailed Kite in Ohio*. By E. A. Brown. *Ibid.*, XIX, No. 3, p. 44, Aug. 17, 1882. — Taken at North Bloomfield, June, 1882.

219. *Note on the Red-headed Woodpecker*. By Samuel F. Dexter. *Ibid.*, XIX, No. 4, p. 65, Aug. 24, 1882. — Nesting at Oakland Beach, near Providence, R. I., July 28, 1882.

220. *Breeding Quail in Confinement*. By John J. Willis. *Ibid.*, XIX, Nos. 9 and 10, pp. 164, 165, 185, 186, Sept. 28 and Oct. 5, 1882. — Account of successful attempts at breeding *Ortyx virginiana* in confinement, copied from Westfield, N. J., "Monitor."

221. *Bird Migration in the Mississippi Valley*. Compiled from the notes of Mr. O. Widmann by W. W. Cooke. *Ibid.*, XIX, Nos. 10, 11, and 12, pp. 184, 185, 205, 224, Oct. 5, 12, and 19, 1882. — A very full and detailed record of arrivals and departures for the spring of 1882 at St. Louis, Mo.

222. *Spring Birds of Quebec*. By John Neilson. *Ibid.*, XIX, No. 11, pp. 205, 206, Oct. 12, 1882. — A detailed report for the period March 1 to July, originally published in the Quebec "Morning Chronicle."

223. *An Audacious Goshawk* (*Astur atricapillus*). By C. Hart Merriam, M. D. *Ibid.*, XIX, No. 12, p. 225, Oct. 19, 1882.

224. *Western Shrike in New England*. By J. C. Cahoon. *Ibid.*, XIX, No. 12, p. 225, Oct. 19, 1882. — Capture of "*Lanius ludovicianus excubitorides*" at Taunton, Mass., Sept. 12, 1882.

225. *The Pine Grosbeak*. *Pinicola enucleator*, Vieill. By Dr. Elliott Coues. *Ibid.*, XIX, No. 14, pp. 264, 265, Nov. 2, 1882. — General history of this species.

226. *Bird Migration in the Mississippi Valley*, from observations collected by W. W. Cooke. *Ibid.*, XIX, Nos. 15 and 16, pp. 283, 284, 306, Nov. 9 and 16, 1882. — A condensed summary of observations made at twelve localities by different observers, extending from Fayetteville, Ark., northward to White Earth, Minn.

227. *A Cormorant in the Adirondacks*. By A. R. Fuller. *Ibid.*, XIX, No. 16, p. 307, Nov. 16, 1882. — A specimen of *Graculus dilophus* Linn., killed Nov. 9, 1882, at Meacham Lake by F. N. Collins.

228. *Caged Pine Grosbeaks*. By B. Horsford. *Ibid.*, XIX, No. 17, pp. 323, 324. — An interesting account of the habits of *Pinicola enucleator* in confinement.

229. *Grouse* [*Cupidonia cupido*] on *Martha's Vineyard*. By S. C. C. *Ibid.*, XIX, No. 18, p. 344, Nov. 30, 1882.

230. *Death of Mr. Willis's Quail*. *Ibid.*, XIX, No. 18, p. 345, Nov. 30, 1882. — Note from Mr. John J. Willis, of Westfield, N. J., announcing the death of his domesticated Quail [*Oxyx virginiana*] with an autopsical report on the dead birds by the editor [G. B. Grinnell]. (See above, No. 220.) For a further note on the same subject see *Ibid.*, No. 20, p. 384, Dec. 14, 1882.

231. *The Boston Anti-Sparrow Crusade*. *Ibid.*, XIX, No. 18, p. 345. — Reprint of a letter by Wilson Flagg to the Boston "Transcript" of Nov. 18, with an introductory note by Dr. Elliott Coues. The formation of a society for the extermination of *Passer domesticus* urged.

232. *The Pine Siskin*. *Chrysomitris pinus*. By Dr. Elliott Coues. *Ibid.*, XIX, No. 19, p. 364, Dec. 7, 1882. — General history of the species, with cut of Pine Finch and of American Goldfinch.

233. *The New Zealand Bird Nuisance*. By "M.", Wellington, New Zealand. *Ibid.*, XIX, No. 20, p. 384, Dec. 14, 1883. — The principal offender is the English House Sparrow (*Passer domesticus*) whose rapid increase and ravages are recounted. It is estimated that they annually destroy grain to the value of \$66,600.

234. *Bird Migration in the Mississippi Valley*. By W. W. Cooke. *Ibid.*, XIX, No. 20, p. 384, Dec. 14, 1883. — A digest of observations made by Mr. H. A. Kline of Vesta, Neb.

235. *Strange Hawks' Nests*. By T. S. Roberts. *Ibid.*, XIX, No. 26, p. 505, Jan. 25, 1883. — In Central Dakota, composed of buffalo ribs.

General Notes.

PROBABLE BREEDING OF THE WINTER WREN (*Anorthura troglodytes hiemalis*) IN EASTERN MASSACHUSETTS.—Mr. George O. Welch tells me that a pair of Winter Wrens once passed the breeding season in a hemlock grove near Lynn. He first noticed them about the middle of May, when their actions led him to suspect that they were preparing to breed. During subsequent visits — which extended well into June — he rarely failed to hear the song of the male, and frequently its mate would be seen hopping in and out among some holes under the hemlock roots. He feels sure that they had a nest in one of these holes but all his efforts to discover it proved fruitless. At length, about the 10th of June, he shot both birds, thus definitely settling their identity.

The authenticity of the above facts is open to no doubt. They do not prove, of course, that these Wrens actually nested, but such an inference is, to say the least, highly probable. Assuming it granted, the occur-

rence must still be regarded as exceptional, for the breeding-range of the Winter Wren is sufficiently well known to preclude any serious question of its availability as a "test species" of the Canadian Fauna.—WILLIAM BREWSTER, *Cambridge, Mass.*

THE WINTER WREN (*Anorthura troglodytes hiemalis*) IN WESTERN VERMONT.—In the northwestern part of the town of Brandon, lying along the bank of the Otter Creek, is a swamp some three miles in length and from one-half to one and one-half miles in breadth. Formerly this was all heavily timbered, but the timber has been largely removed and at this time but little of the "first-growth" remains; this is near the centre of the swamp. The swamp has an elevation above the sea of probably about 350 feet, and is overflowed by the creek during high water. On June 4 of last year (1882), while botanizing in the heavy "first-growth," my attention was attracted by a pair of Winter Wrens. They constantly darted in and out of a large brush-heap, scolding the while in true Wren fashion, and seemed very desirous that I should leave. A close examination of the brush-heap and vicinity failed to reveal the site of the nest. On July 4 following, I again visited the locality, and about this same brush-heap saw old birds of this species feeding young but a day or two from the nest. This of course set at rest all doubt about their breeding here. I have never seen them in summer before. In the following November I spent two days (24th and 25th) in this swamp and, to my surprise, saw a pair of these Wrens. Snow covered the ground to a depth of two inches or more, and the thermometer was but little above zero. The latest I have noted them before was the first part of October.—F. H. KNOWLTON, *Middlebury, Vt.*

TROGLODYTES AEDON PARKMANI IN KANSAS.—I have the pleasure of recording the first capture of this bird in Kansas. It was shot at Larned, Kansas, April 21, 1881, by Mr. Geo. C. Waterman (No. 3903 ♂), and identified by Mr. Ridgway.—H. K. COALE, *Chicago, Ill.*

CAPTURE OF THE GREAT CAROLINA WREN (*Thryothorus ludovicianus*) IN CONNECTICUT, IN MARCH.—A male of this species was shot here March 2, 1883, by Mr. Chas. H. Neff, and is now in his cabinet. It was in good condition—was in song and killed among the rocks on a wooded hillside.

So far as I can learn, the only previously recorded capture of this Wren in Connecticut is the one taken by J. N. Clark at Saybrook, Nov. 25, 1878 (see this Bulletin, Vol. IV, p. 61). —JNO. H. SAGE, *Portland, Conn.*

A SECOND INSTANCE OF THE WINTERING OF THE PINE WARBLER IN MASSACHUSETTS.—To Mr. Browne's recent record (this Bulletin, Vol. VII, p. 119), of the probable wintering of the Pine Warbler in this state, I can now add a second. On December 30, 1882, Mr. C. J. Maynard showed me a female *Dendroica pinus*, in the flesh, which had been killed

at Duxbury, Mass., by Mr. Chauncey W. Chamberlain, on December 27. It was found in company with Yellow-rumps (*Dendroica coronata*) which, as we now know, winter here regularly and in considerable numbers.—WILLIAM BREWSTER, *Cambridge, Mass.*

DEVELOPMENT OF A BROOD OF BLACK-AND-YELLOW WARBLERS (*Dendroica maculosa*).—My co-laborer in this field, Mr. James W. Banks, desires me to record the result of some observations made by him last season, of the rapid growth of young Magnolia Warblers. On June 26, just at dusk, a nest was discovered containing four eggs, which exhibited signs of advanced incubation, and early on the following morning one of the chicks had freed itself from the shell, while the others were on their way out. When the nest was visited on July 1, the four chicks were partially fledged and on the fourth day of the month, or eight days from the time they were hatched, two of the brood had left the nest and the remaining pair were so large they almost filled it and were nearly in full feather. While Mr. Banks stood watching them one of the chicks jumped up on the edge of the nest and fluttered off to a bush near by, and, a couple of hours later on, the nest was empty and the parent and brood were seen in an adjoining hedge.—MONTAGUE CHAMBERLAIN, *St. John, N. B.*

CAPTURE OF *ÆGIOTHUS LINARIA HOLBOELLI* IN THE LOWER HUDSON VALLEY.—Mr. Ezra Acker, on Feb. 12, killed a specimen of this large Greenland variety of the Redpoll Linnet, out of a small passing flock. The following day another was captured out of a large mixed flock of common Redpolls, Goldfinches, and Pine Linnets, specimens of each species having been killed at the one discharge of the gun. Mr. Robert Ridgway, who kindly examined the two specimens, considers them typical.—A. K. FISHER, M. D., *Sing Sing, N. Y.*

INDIVIDUAL VARIATION IN COLOR IN THE EUROPEAN CROSSBILL.—At the time my recent paper on extreme individual variation went to press, I was not aware that the European Crossbill had been shown to assume its red, yellow, and orange plumages with the same irregularity that I pointed out in our own two species. I came across a popular volume of natural history at the hotel here to-day from which I learn that this was done by Mr. Yarrell, many years ago. My author in hand, Rev. J. G. Wood, quotes Yarrell quite freely, but how the age of the birds was ascertained does not appear.

I am of course unable to learn, in this remote region, what may be the views of modern European writers as to this matter. It is sufficiently evident, however, that our own authorities either disagree with Mr. Yarrell or else have overlooked his evidence.—NATHAN CLIFFORD BROWN, *Boerne, Texas.*

THE COW BUNTING WINTERING IN MASSACHUSETTS.—On January 2, 1883, Mr. William Brewster and the writer secured two Cow Buntings (*Molothrus ater*) in Belmont, Massachusetts. Both were males, one being an adult in full plumage, the other a young bird in that mottled dress

usually seen in September specimens. They were feeding in company with Redpolls (*Aegiothys linaria*) and Goldfinches (*Chrysomitris tristis*) among some rank weeds in an old field. Their crops were filled with seeds. The ground, at the time, was partially covered with snow and the weather cold. There is, apparently, no previous record of the occurrence of this species in winter, in Massachusetts. — HENRY M. SPELMAN, *Cambridge, Mass.*

AN UNUSUAL INFLUX OF THE THREE-TOED WOODPECKERS (*Picoïdes arcticus* AND *P. americanus*) INTO EASTERN MASSACHUSETTS. — I am indebted to Mr. George O. Welch for the following interesting notes. Some time in the summer of 1860 a fire swept through a piece of heavy white pine timber in Lynn, killing most of the trees. In the natural course of events the charred trunks became infested with wood-borers, and during the following winter (1860-61) the place was a favorite resort of various kinds of Woodpeckers. In what manner the news of the feast was advertised in the remote forests of the North is not explained, but certain it is that with the first cold weather both species of *Picoïdes* appeared on the scene. Of *P. americanus* only three specimens were actually taken, a female by Mr. Welch, and a fine pair by Mr. N. Vickary. *P. arcticus*, however, was actually abundant, and remained through the entire winter. Mr. Welch often saw as many as six or eight during a single visit to these woods, and numerous specimens were killed and preserved. Most of the individuals seen were females, the yellow-crowned males being comparatively rare. Since 1861 only two Three-toed Woodpeckers (both *P. arcticus*) are known to have been taken in Lynn.

There is nothing novel in the fact of these Woodpeckers assembling in numbers in a tract of recently-burned timber; indeed *Picoïdes arcticus* is rather notorious for this habit. But how the knowledge of such an attraction could have been conveyed so far as it must have been in the present instance is little short of marvellous. We commend the problem to the attention of those ornithologists who refuse to believe that there is anything "mysterious" in the periodical movements of certain migratory birds. — WILLIAM BREWSTER, *Cambridge, Mass.*

THE BARN OWL IN CANADA WEST. — Mr. T. McIlwraith, of Hamilton, informs me of the capture of *Aluco flammeus pratincola* in that locality on the 9th of May, 1882. The bird is new to that place, if not to Canada. — ELLIOTT COUES, *Washington, D. C.*

CAPTURE OF RICHARDSON'S OWL (*Nyctalu tengmalmi richardsoni*) NEAR PROVIDENCE, R. I. — A beautiful male specimen of this species was taken east of this city and brought to us by a milkman, Dec. 18, 1882. As it passed through several hands before reaching us we could not ascertain just where it had been killed, but think it must be accredited to Massachusetts, as it was in all probability taken in Seekonk, where the man lives who brought it to us. As the Massachusetts line runs but two miles east of this city, this is almost beyond doubt a Massachusetts record. — F. T. JENCKS, *Providence, R. I.*

CAPTURE OF THE GREAT GRAY OWL IN MASSACHUSETTS. — Under date of Feb. 25, 1882, Mr. Robert O. Morris, of Springfield, writes me that "a Great Gray Owl (*Syrnium cinereum*) was captured in Agawam last week, the skin of which has been preserved." A later letter, in reply to a request for further information, states that the capture was made by Mr. E. A. Kellogg, on February 21, and that Mr. Kellogg's attention was attracted to the bird by a number of Crows circling around a pine tree on a branch of which the Owl was sitting. Length of the specimen, 28 inches; extent, 60 inches; tail, 13.

Only two specimens have been recorded as positively known to have been taken in this State in the last forty years, but there are several earlier records.—J. A. ALLEN, *Cambridge, Mass.*

RECENT OCCURRENCE OF THE FLAMMULATED OWL IN COLORADO. — Writing under date of October 25, 1882, Mr. C. E. Aiken sends me the following interesting note: "I have two specimens of *Scops flammeolus* to record from Colorado. One—a young bird in the nestling plumage—was taken about the middle of September in a creek bottom between Colorado City and Manitou. The person who brought it to me discovered it, about dusk, sitting on the dead twig of a plum bush under a group of cottonwoods, and going up to it seized it in his hands. Ascertaining the exact locality, Mr. Nelson and I looked the ground over carefully next evening hoping to find others of the same brood, but we saw none. I regard the occurrence of this specimen as a very interesting one, for it was doubtless bred in the immediate vicinity. The locality is quite different from the one where my own capture was made, which was on a rocky hillside covered with pines, and at an elevation of about 7500 or 8000 feet.

"The second recent specimen was found dead on the ground near the San Louis Lakes and Mosca Pass in the San Louis Valley. This is precisely the same locality where my friend Dr. Walbridge shot one four years ago. The present bird was found by friends who had seen the Doctor's specimen and who sent it to me for identification last week. It was in perfect autumnal plumage, but had been dead so long that I could only make of it an indifferent skin."

It is perhaps necessary to explain that two of the four specimens mentioned above have been already announced in this Bulletin; Mr. Aiken's in Vol. IV (p. 188) by Mr. Deane, and Dr. Walbridge's in Vol. V (pp. 121, 122) by Mr. Ingersoll. In addition to these records there is also one by Mr. Ridgway* of a specimen taken at Boulder by Mrs. Maxwell. Accordingly we now have knowledge of five Colorado examples of this rare little Owl. — WILLIAM BREWSTER, *Cambridge, Mass.*

CAPTURE OF THE GOLDEN EAGLE AT ALBANY, N. Y. — On the 15th of February of the present year, I secured a fine adult male Golden Eagle, captured in this vicinity a short while previously by a hunter, by whom it was kept in captivity for some time. The Eagle, although not seriously

*"Field and Forest," June, 1877, p. 210. See also this Bulletin, Vol. V, p. 185.

or painfully injured, utterly refused all food until, in a moment of passion, he flew at his captor, who had barely time to strike a blow with a heavy stick which he had with him. Fortunately for the hunter the blow was fatal, and in this condition the late "monarch of the mountain forests" was brought to me. Owing to sickness, I was unable to prepare the Eagle myself, and so sent it to Mr. C. J. Maynard to be mounted for my collection. — G. A. LINTNER, *Albany, N. Y.*

WINTERING OF SORA RAIL AT THE NORTH. — Mr. L. S. Ward of Rochester, N. Y., writes me that he received a female *Porzana carolina* caught in his vicinity on Dec. 12, 1882. The bird was brought to him by a farmer who said that while hunting rabbits with a ferret on his farm, which is watered by a creek where Rails abound in season, this bird was driven from a hole in the ground. "It seemed to be in a partially torpid condition, and was easily caught as it crouched on the ground." This was nearly in the midst of winter, with cold weather and plenty of snow and ice. On skinning the bird it proved to be much emaciated. While I do not wish this paragraph to be held up in evidence that I believe that Rails hibernate in the mud, or even turn into frogs, the circumstances of the case seem quite worthy of record. — ELLIOTT COUES, *Washington, D. C.*

NESTING HABITS OF THE CANADA GOOSE (*Bernicla canadensis*). — In view of the various statements made in regard to the nesting of the Canada Goose in the Northwest, I will briefly give the results of three seasons' observations on the Upper Missouri, Yellowstone, and Big Horn Rivers in Montana. Just how far down the Missouri River their breeding range extends, I am unable to say, but from the mouth of the Yellowstone, up both rivers, pairs are very often seen as one ascends the streams.

These Geese usually arrive in Montana early in March, and many of them are paired at that time; by the first of May the nests contain the full complement of eggs, generally five in number.

Some of the published accounts would lead one to infer that this Goose commonly and habitually nests in trees, but this, in the region I now refer to, is by no means the case. Their favorite nesting sites are on the numerous low sandy islands in these rivers, covered in the higher parts with a growth of young willows. Among these the pair scratch a slight hollow in the sand, around which they place a few sticks and twigs, the eggs being separated from the ground by a layer of gray down furnished by the parents. Occasionally the nests are placed on the banks among high grass or on piles of drift-brush, but this is uncommon, as few nests would escape the ever present coyoté. One nest was made on top of a pile of brush that had collected in the top of a fallen tree that had floated down and lodged near the middle of the river, — a very conspicuous place but quite safe from four-footed enemies. I have also known a pair to nest on a rocky ledge about three hundred yards from the river, and this nest was occupied for several successive years.

When these Geese nest among the branches of a tree, I do not think they ever construct the nest entirely themselves, but take possession of a deserted nest of the Fish Hawk and repair it with twigs and a lining of down. They have been seen to carry small sticks to the nest for this purpose. The nest may also be placed upon the top of a stump or broken trunk of a tree, especially if surrounded by a growth of young sprouts.—J. C. MERRILL, *Fort Custer, Montana Ter.*

LARUS GLAUCESCENS IN THE BAY OF FUNDY.—Mr. George O. Welch of Lynn, Mass., has shown me a Glaucous-winged Gull which was shot by a fisherman in the Bay of Fundy about November 1, 1881. It is an adult in winter plumage with the mantle immaculate, but the head and neck flecked with dusky, as in adult Herring Gulls taken at the same season. The sex, unfortunately, was not ascertained.

This specimen, I believe, is the first that has been taken on the Atlantic coast south of Cumberland Sound, where Mr. Kumlien found the species numerous and breeding during the summer of 1878.* Previous to this discovery *Larus glaucescens* was supposed to be confined to the Pacific Ocean; the inference now is that it may occur almost anywhere along our Atlantic seaboard, as far to the southward, at least, as the Bay of Fundy. There is little doubt that it will be eventually added to the fauna of New England if, indeed, the specimen announced by Mr. Merrill in the following note may not be properly regarded as establishing such a claim.—WILLIAM BREWSTER, *Cambridge, Mass.*

AN OCCURRENCE OF LARUS GLAUCESCENS AT GRAND MENAN, N. B.—One of my collectors wrote me from Grand Menan, under date of Jan. 21, 1883, that among a lot of birds he had sent me was a "Jay Gull" which he said was *very rare* in that locality. With much interest I awaited its arrival, and, on examining the specimen referred to, was convinced that it was an example of *Larus glaucescens*, and this conviction has been verified by the kindness of Mr. William Brewster, who has recently examined a specimen which was procured near the same locality. My specimen is a beautiful adult male in full plumage, and was shot south of Grand Menan. Length, 23.75; wing, 17.50.—HARRY MERRILL, *Bangor, Maine.*

THE WHITE-WINGED GULL (*Larus leucopterus*) IN MAINE.—I have lately purchased of Mr. N. Vickary a pair of White-winged Gulls which were sent to him in the flesh from West Sullivan, Maine. One is a young bird in its first autumnal plumage; the other is passing from the immature into the adult dress. They were received by Mr. Vickary sometime in January, 1883.—WILLIAM BREWSTER, *Cambridge, Mass.*

* See Bull. U. S. Nat. Mus., No. 15, 1879, pp. 98, 99.

WINTER BIRDS IN NEW BRUNSWICK.—Several correspondents have asked me if anything has been observed in this locality that would help to account for an unusually large number of boreal birds having visited more southern points during the season that has just passed, but I have failed to find any reason for such an occurrence; for, so far as I can gather from personal observation, and from correspondents in the northern sections of the Province, the usual species have been seen here and in much the same numbers as in former seasons. The Snow Buntings came along about two weeks earlier than they have been noticed for several years, and of the Pine Grosbeaks observed, a larger proportion perhaps have been in the red phase of plumage. Food of all kinds has been as plenty as usual; indeed, the Raptorial species have had a better chance than usual to capture the small rodents, as the fall of snow has been extremely light. But no increase of these birds has been noticed.—MONTAGUE CHAMBERLAIN, *St. John, N. B.*

SOME ALBINOS IN THE MUSEUM OF THE PHILADELPHIA ACADEMY.—Among the numerous albinistic birds in the Academy's collection, some species are represented in which I believe this peculiar whiteness has not yet been noticed. There is a perfect albino Merganser (*Mergus serrator*); a Magpie (Yellow-billed?) in which the dark parts are replaced by coffee-color; two Red-head Ducks (*Fulix ferina americana*) that have the head and neck white; two specimens of the Canada Goose (*Bernicla canadensis*) that have the black of the head and neck replaced by white; and a Black-poll Warbler (*Dendroica striata*) in which the entire plumage is suffused with white.

Of those already recorded, we have perfect albino specimens of the Chewink (*Pipilo erythrophthalmus*) and the Kingbird (*Tyrannus carolinensis*), and a Red-tailed Hawk (*Buteo borealis*) from Delaware Co., Pa., which is white, with the exception of the tail, which is of the usual red color.

Melanism is exemplified by a handsome specimen of the Meadow Lark (*Sturnella magna*) from New Jersey. The upper plumage is of the normal color, while the whole head, neck, and under parts are perfectly black. There is the faintest possible trace of yellow along the sides, and no white feathers in the tail, which is very dark above and below.—CHAS. H. TOWNSEND, *Acad. Nat. Sciences, Philadelphia, Pa.*

A LETTER FROM AN OLD-TIME ORNITHOLOGIST.—[The following letter, written about eighteen months before Dr. Kirtland's death, seems of sufficient interest to be worthy of publication.—EDD.]

CLEVELAND, O., MAY 22, 1876.

MR. H. A. PURDIE, SEC'Y N. O. C.,

DEAR SIR. Yours of the 15th inst. informing me that I was elected a corresponding member of "the Nuttall Ornithological Club of Cambridge," was duly received. It found me at 83 years of age, confined to a sick room, with no very favorable evidences of any improvement of

health, and at the same time so much enfeebled that it is with difficulty that I can command my pen and mind sufficiently to respond to your communication.

Please tender my acknowledgements to your Society for the honor they have conferred on me and accept personally my thanks for your kind attentions. Should sufficient betterment ever permit, it will afford me pleasure to hold further correspondence with you. It is possible I might afford you some facts of interest, bearing on the pursuit of your Association.

Ornithology has engaged my attention through a long life. In the year 1810 I taught a district school, in a log-house, in Poland, Trumbull County, Ohio, and from that period to the present have carefully watched and studied the habits of her birds.

Few persons are aware, at this day, of the numerous and extensive changes which have occurred, not only among her birds but in all of the departments of nature, during her transition from a heavy Forest state to a thickly populated territory, changes as prominent as those which mark the boundaries between the Geological periods in pre-historic times.

Then the Turkey Buzzard, by hundreds, swarmed about the carcasses of all dead animals during summer, and frequently nested in the forests along the Mahoning and Big-Beaver Rivers. It is many years since I have seen a solitary specimen in this section of country.

Then the Swallow-tailed Hawk, in flocks of a dozen or more, might occasionally be observed, reconnoitering over fields of dead and girdled timber and diving down to capture Garter Snakes, then numerous in all of our partially cleared fields. This beautiful bird is no longer within the boundaries of Ohio.

Then many species of Ducks and other water birds bred in great numbers in every part of Northern Ohio, then known as *New Connecticut* or the *Connecticut Reserve*. During the spring and autumn season, every lake, pond, river and creek were crowded with numerous flocks of migrating water birds. Now it is a rare event to meet with even a solitary individual.

Then the Parroquet was very common in the Miami & Sciota valleys, and occasionally were seen in numerous flocks as far north as the shore of Lake Erie. Not a solitary bird of this species has perhaps been seen within the State during the last thirty years.

On the other hand many other species, formerly rare or unknown here—especially smaller kinds, are now abundant.

Within the last week the English Sparrow has for the first time visited my premises, five miles West from Cleveland, in which city it was first introduced five or six years since and has now become there very numerous.

Very respectfully Yours,

J. P. KIRTLAND.

EGGS OF BRITISH BIRDS IN EXCHANGE FOR EGGS OF AMERICAN BIRDS.—[As being possibly of interest to some of our readers, Professor Baird has transmitted the following letter for publication in the Bulletin.—EDD.]

CLAVERING PLACE, NEWCASTLE ON TYNE,
13 DECEMBER, 1882.

DEAR SIR:—

I take the liberty of writing you, believing that you will not be averse to helping Natural History students, in whatever branch. I am a private collector of British Birds' Eggs, and get a large series of clutches through my hands yearly, collected here and in Scotland, Europe, etc. Can you oblige me with the names of a *few* gentlemen in the States who are also *private* collectors, who would be likely to be willing to exchange eggs? Any American list would do as a basis to work upon quite well for me. I should esteem it a VERY great favor if you will put me in communication with one or more such gentlemen. I should prefer one who gets a large series of eggs through his hands yearly, if possible, because I should like a pretty large series of eggs of the birds common to America and England, and am in a position to offer a large series of British eggs in exchange. All, of course, prepared in a first class manner, with full particulars as to locality and date of collection. Awaiting your reply,

I am, Yours truly,

To Professor Baird, Esq.

A. W. JOHNSON.

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BULLETIN

OF THE

NUTTALL ORNITHOLOGICAL CLUB:

A Quarterly Journal of Ornithology.

Vol. VIII.—JULY, 1883.—No. 3.

CONTENTS.

	PAGE.
BIRDS OF THE LOWER URUGUAY. By <i>Walter B. Barrows</i>	128
BIRD NOTES FROM WESTERN ONTARIO. By <i>T. McIlwraith</i>	143
NOTES ON SOME OF THE WINTER BIRDS OF MASSACHUSETTS. By <i>Herbert K. Job</i>	147
LIST OF BIRDS OBSERVED IN THE VICINITY OF COLORADO SPRINGS, COLORADO, DURING MARCH, APRIL, AND MAY, 1882. By <i>J. A. Allen and William Brewster</i>	151

RECENT LITERATURE.—Stearns and Coues's "New England Bird Life," 161; Everett Smith's Catalogue of Maine Birds, 164; Contributions to the Anatomy of Birds, 168; Ridgway on New Species and Sub-species of Birds, 168; Reichenow and Shallow's Compendium of newly discovered Genera and Species of Birds, 169; Reichenow's Conspectus Psittacorum, 169; Stejneger on two new Races of *Myiadestes obscurus*, 170; Stejneger's Synopsis of the West India Species of *Myiadestes*, 170; National Museum Desiderata of American Birds, 170; Dubois on Geographical Variation in the Crossbills, 170; Birds of Pennsylvania, 171; Minor Ornithological Publications, 171.

GENERAL NOTES.—Capture of Blue-gray Gnatcatcher (*Polioptila cærulea*) in Connecticut, 179; Parkman's Wren in Illinois, 179; Breeding of the Short-billed Marsh Wren (*Cistothorus stellaris*) in the Hudson Highlands, 179; Early Capture of the Orange-crowned Warbler, 179; Occurrence of *Siurus naevius* in Greenland, 179; Capture of the Yellow-breasted Chat at Albany, N. Y., 180; Nest of *Chrysomitris pinus* at Sing Sing, N. Y., 180; Susceptibility of a Bird to color, 181; The Lark Finch again in Massachusetts, 181; The Meadow Lark (*Sturnella magna*) in Vermont in Winter, 182; *Geococcyx* as a Vocalist, 182; A partial Albino Short-eared Owl (*Asio accipitrinus*), 183; Great Gray Owl in Rhode Island, 183; Occurrence of a third Massachusetts specimen of the Labrador Gyrfalcon (*Falco gyrfalco obsoletus*), 184; Instance of Semidomestication of California Quail, 184; The Wood Ibis in Massachusetts, 185; The Scarlet Ibis in Florida, 185; Rails and Snipe in Ohio in Winter, 186; Breeding of the Mallard in New England, 186; The Glaucous Gull (*Larus glaucus*) at Portland, Me., 186; The Common Cormorant on the coast of South Carolina, 186; Occurrence of the Northern Phalarope and Audubon's Warbler, and Nesting of the Mocking Bird in Western Kansas, 186; A California Bird-Wave, 188.

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EIGHTH YEAR OF PUBLICATION.

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Assisted by PROF. S. F. BAIRD *and* DR. ELLIOTT COUES.

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BULLETIN

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VOL. VIII.

JULY, 1883.

No. 3.

BIRDS OF THE LOWER URUGUAY.

BY WALTER B. BARROWS.

(Continued from p. 94.)

25. **Paroaria cucullata** (*Lath.*). CARDINAL COLORADO (RED CARDINAL).—This is the bird familiar to many as a cage-bird under the name of Brazilian Cardinal. It is said that the market is mainly supplied by the netting of the birds in lower Brazil and Paraguay.

As they are commonly found in large flocks, are quite unsuspicious, and feed much on the ground, it would seem easy to catch them in nets, but I have never seen it done. The sexes are equally brilliant and not distinguishable by color, so I do not know whether the females sing or not. The species is abundant wherever any considerable extent of woods remains, and undoubtedly it nests near Concepcion, but I did not have proof of it further than that implied in the presence of the birds in undiminished numbers through the warm weather.

26. **Poospiza nigrorufa** (*Lafr. et d'Orb.*).—One of the commoner Finches of the country, abundant everywhere in wet, bushy ground, and often seen scratching among the leaves like a Chewink (*Pipilo*). Its cheery and often repeated little song is so constantly heard that one hardly notices it more than the droning of the cicadas or the chirping of the grasshoppers;

yet there is a good deal of real music in it. Although I not unfrequently saw young unable to fly, I could never find the nest, but was convinced that it must be placed on the ground, at least normally.

27. **Poospiza lateralis** (*Nordm.*).—A single specimen of this species was taken at Concepcion, September 29, 1879. It was in company with another individual of the same species and several of the preceding. During the summer following I looked in vain for others, but late in the autumn (April 23), while hunting capybaras on a stream about a dozen miles west of this place, several were observed. As our charges at the time were of buckshot none were secured. The following September, when I was on the lookout for this bird, almost all the favorable ground was flooded, and I only caught a glimpse of one on a nearly submerged island among impenetrable thickets where he escaped the shot.

The species seems to be but slightly known, and would appear to be only migrating at the points mentioned.

28. **Poospiza melanoleuca** *Vieill.*.—Although much better known than the preceding species, this bird was far from abundant at Concepcion. It was only met with in autumn on one or two occasions, and was found then among scattered trees and bushes on high ground, and in company with *Synalaxis*, *Zonotrichia*, and some Gnatcatchers.

It had the general motions and appearance of a Titmouse, thus differing widely from the other members of the genus.

During the trip to the Sierras of the Pampas, and while in camp on the Pigué, about 25 miles from the town of Carhué, a *Poospiza* was taken which appeared to be another species (possibly *torquata*), but it was moulting and was unfortunately afterward lost.

29. **Phrygilus caniceps** (*Burm.*).—Only met with in the Sierra de la Ventana, where it was abundant in flocks, some of which numbered as many as a hundred individuals. When found near the base of the sierra they were almost always associated with the common *Zonotrichia*. Although most of them had not finished moulting, they were constantly singing and seemed perfectly contented with their desolate surroundings.

30. **Gubernatrix cristatella** (*Vieill.*). CARDINAL AMARILLO (YELLOW CARDINAL).—This is another well known cage-

bird, but less common than the Brazilian Cardinal, with which it is often associated, both in freedom and captivity. It is said to gather in flocks to the number of several hundreds, but I have never seen more than three in company, and in such cases the adage seemed to be verified,—“Three’s a crowd.” As there is no trace of red on the bird the name Yellow Cardinal can hardly be justified except on the ground that it is “the *name* of the thing.”

31. **Diuca minor** *Bp.*—A common bird among scattered bushes or thickets in comparatively open ground. It disappears during the coldest weather, but makes its appearance again in little flocks late in July or early in August. These soon scatter, and through the summer the male is commonly heard chanting a rather short and not particularly pretty song from the top of some low bush or from a fence post. The nest and eggs were not taken.

32. **Zonotrichia pileata** (*Bodd.*). CHINGOLO; CHINGOLITO.—By far the most familiar if not the most abundant bird of the family. It is resident through the year at Concepcion, and also much farther south. It spends most of its time on the ground, but I think is never met with in any numbers at a distance from shrubs or trees of some kind. The nest is built on the ground, usually under a tuft of grass, a thistle, or almost anything which will conceal it. In one case I found it placed within and beneath the battered rim of an old tin pan beside the road. Three eggs are usually laid, seldom four, and never, to my knowledge, more; but the Cowbird (*Molothrus bonariensis*) usually adds one or two more and sometimes even four or five. More than half the Sparrows’ nests found contained eggs of the Cowbird, and quite frequently I found them deserted, evidently from that cause. The earliest nest found was October 4, and from that time until late in December they were constantly noticed, sometimes a half dozen in a morning’s collecting.

Undoubtedly two broods are reared by many of the birds if not all. The eggs vary widely in color, but the ground-color is always bluish-green, sometimes sparingly and irregularly spotted with coarse markings; at other times profusely and evenly sprinkled with minute dots, the markings being different shades of brown.

33. **Coturniculus manimbe** (*Licht.*).—It was not until a

year had been spent at Concepcion that I found this species there. Possibly it had been overlooked, as all the specimens subsequently taken near this place were found in cultivated ground, several being shot while perched on sheaves of wheat and in full song. This was at Christmas time, 1880. Two months later we found it abundant in similar places near Bahia Blanca, as well as on the grassy slopes at the foot of the Sierra de la Ventana. At all these places it was breeding, but nothing was learned of its nest or eggs.

34. **Embernagra platensis** (*Gm.*).—A common resident at Concepcion, where it breeds. Also numerous in suitable localities at all other points visited. It prefers damp ground with or without bushes, and where the plumed pampas-grass abounds the bird delights to sit swaying on its feathery tips, chanting his weak but well-meaning song. The nest is placed near or on the ground and contains three white eggs with a very few dark flecks at their larger ends. Sets were taken at Concepcion, October 12 and December 7, and at Azul, January 28, indicating a second and perhaps a third brood.

35. **Chrysomitris barbata** (*Mol.*). JILGUERO (GOLD-FINCH).—I first made the acquaintance of this sprightly little songster in the markets and bird-stores of Buenos Aires where they are kept by hundreds as cage-birds. Afterwards I found them more or less abundant at all points visited. Like our common Yellowbirds, they are almost always in flocks, always restless, and able to sing well when they feel like it. Nothing was learned of their nesting habits.

36. **Sycalis luteola** (*Sparm.*). MISTO or MIXTO. (MIXED, perhaps in allusion to the character of the flocks).—Abundant everywhere in immense flocks, often of many thousand individuals, and largest in winter, when they are shot by the hundred and sold in the markets of Buenos Aires. Other species often help to swell the size of these flocks, *Chrysomitris* perhaps most often, and then *Zonotrichia*, *Spermophila*, and even *Anthus correndera*. Nests were found during November, December, and January, and probably many breed during October. The nest is very variable in size, material and location. Probably it is oftenest placed on the ground, but I have taken eggs from a well-built nest of the Oven Bird (*Furnarius*) ten feet from the ground, and was told by natives that the bird often nests in

hollows of fence posts or of trees and stumps. The eggs are nearly white, spotted pretty finely and evenly with brown, and are commonly five in number. This species seems to have no song even during the breeding season.

37. **Cassicus solitarius** (Vieill.). BOYERO (COW-HERD. The significance of this name here is not obvious; I suspect, however, that it was originally given to the Cowbird (*Molothrus*), and the present species being entirely black has been confounded with that bird).—Only a single specimen taken (Concepcion, October 12, 1880), but one or two other individuals were seen at about the same time. It is said to be much more abundant a little further up the river and in sections where the heavy swamp forest has not been cleared. According to these persons the song is very rich and beautiful, and I was often assured that single birds were worth as much as ten dollars in Buenos Aires.

An allied species, *Scaphidurus ater* (Vieill.), was not uncommon as a cage-bird. It is found along the Upper Uruguay, but has not yet been detected as far south as Concepcion.

38. **Icterus pyrrhopterus** (Vieill.).—Like the preceding, and with equal inaptness, called Boyero or Boyerito (Little Cowherd).

This species is not abundant, yet was frequently met with, and seems to be resident at Concepcion through the entire year. They commonly go in pairs, were never seen on the ground or far from the swamps, and hang in any position while feeding on insects or berries. I do not recall ever having heard one sing, but have seen them caged, and they are credited with a fine song. A nest found December 20, 1880, contained three nearly fledged young. It was pensile, but only about as deep as broad, was neatly woven of fine yellow grass, and suspended among the topmost twigs of a small mimosa at a height of about fifteen feet from the ground. The eggs I did not see.

39. **Molothrus bonariensis** (Gm.). TORDO (THRUSH, possibly so called because the European Blackbird (*Turdus merula*) is sometimes so called in Spain, and the present species resembles it in color. It seems probable, however, that the name Tordo belongs to *Cassicus solitarius*, and the name Boyero, by which that is known, to this species.)

The common Cowbird abounds at Concepcion through the year, but is rather less abundant in May and June than at other

times. In general habits it is precisely similar to *M. ater*, and the eggs of the two birds are scarcely distinguishable. I am inclined to think that the Argentine bird differs less from our own in its parasitic habits than is generally supposed. Its great abundance and the comparative openness of the country will in great measure account for the larger number of eggs found as well as for the numbers sometimes observed in single nests. The largest number I ever found in any nest at one time is four, but not very rarely twice that number is found, as witnessed by many reliable observers. Of course this overdoes the matter so as to compel the rightful owner to desert the nest, but I suspect our own Cowbird would be no wiser under similar pressure.

40. ***Molothrus rufo-axillaris*** Cass.—Much less common than the preceding, and usually met with only in the woods or close to them. Here little parties of ten or a dozen may be found at any season. Although so common, I was not able to satisfy myself by observation either that they did or did not build nests for themselves or impose on other birds. I have frequently seen them in small parties clambering about the bulky nests of different species of *Synallaxis*, and occasionally even entering such nests as if they owned them; but examination afterward never revealed eggs of any kind in the nests, so that I was at a loss to account for the proceeding. Twice I have found in the nests of *Zonotrichia pileata* a good sized white egg (in one case spotted, in the other immaculate) differing in size, shape, and color from the average egg of *M. bonariensis*, yet I am not ready to say that these were not abnormal specimens laid by that species. As I have never seen the eggs of *M. rufo-axillaris* I can of course draw no conclusions in that direction, but suspicion naturally falls on any member of a disreputable family who has not proved an alibi.

41. ***Agelæus thilius*** (Mol.).—Abundant in flocks through the year, but the flocks seldom consist of more than fifty individuals, oftener of only a dozen. Breeds in the marshes during October and November, but rather sparingly; probably the majority breed farther south. The male in spring has a low but sweet and varied song.

42. ***Xanthosomus flavus*** (Gm.).—During the first year spent at Concepcion this species was not observed, but in October, 1880, it made its appearance in flocks and remained to

breed. About a dozen pairs nested near each other on low bushes in a very wet marsh. The nests were rather bulky, made of weed stalks, grass, etc., and contained three or four eggs each, white spotted with brown. The eggs were laid about the third week in December, and with them were found many Cowbird's eggs.

Late in March, 1881, we found this species in large flocks on the Pigué, and it was a beautiful sight to see a hundred or more fluttering about among the snowy plumes of the pampas grass and displaying their rich black and yellow dress. Unlike most other birds obtained at that time, their plumage seemed nearly as bright and fresh as in summer.

43. **Amblyramphus holosericeus** (*Scop.*).—Found rather sparingly at Concepcion, but resident through the year and breeds. The birds are found singly, or at most in pairs, frequent swamps and marshy ground, and are remarkable for their clear, penetrating, bell-like call, which may be heard at least half a mile, yet sounds hardly louder when heard at a distance of a dozen yards. The feathers of the head, neck, and tibiae are of the most brilliant scarlet, while the rest of the bird is lustrous black. The sexes are alike in size and color; and a young female only a day or two from the nest showed many red touches about the head. Of the nest and eggs I am ignorant; the young bird just mentioned was taken December 24, 1880.

44. **Pseudoleistes virescens** (*Vieill.*). **PECHO-AMARILLO** (YELLOW-BREAST).—No bird of the family is better known to the average Argentine than the Pecho-amarillo. Every rush-bordered pool or stream and every acre of long, coarse grass has its colony of these birds, and in the breeding season they go back and forth in troops, laden with building materials and apparently as unmindful of man and beast as the grass amongst which their nests are built. Some nests were begun as early as the middle of August, and on October 2 an unfinished nest and one containing nearly fledged young were found side by side. The nest is a substantial structure of reeds, grass, and sometimes mud, lined with fine grass and built into and around the grass stems so as to leave it at least a foot or two above the mud or water. The eggs are four or five in number, white, heavily marked with brown, often making them appear clear chocolate-colored. Two broods are usually reared.

45. **Leistes superciliaris** Bp. PECHO-COLORADO (REDBREAST).—My attention was first called to these birds by a somewhat odd habit of the males soon after their arrival from the north early in October. They rise quickly and silently by vigorous beats of the wings to a height of fifty or sixty feet, when they suddenly spread the wings and glide slowly down to the ground again, at the same time giving vent to a wheezy little song, which suggests the idea that the exertion of the ascent has left very little breath for vocal exercises. The wings are not moved at all during the descent until within a few feet of the ground. This exercise is repeated once in every two or three minutes, sometimes for hours together, and the sight is very pleasing when, as is usually the case, the birds are quite numerous. The nest is placed on the ground and the eggs are spotted. The only set taken was found December 20, 1880, and consisted of four fresh eggs. The birds are only found in open, wet, grassy places, and while many pairs may be found in the same meadow or field, they never seem to be truly gregarious, even after the nesting season is over.

46. **Sturnella defilippii** Bp. PECHO-COLORADO (REDBREAST).—Not found at Concepcion at all, nor was it met with until reaching Azul. At this place and further south it seems to replace the preceding species and bears the same name. It was seen nearly every day during our trip to the Pampean Sierras, and only parted company with us at Puan after several severe frosts. At the last-named place the flocks frequently numbered several hundred individuals, and during the whole time of our acquaintance with it it was always seen in large but scattering flocks.

47. **Cyanocorax pileatus** Temm. URRACA (in imitation of its usual call-note).—Confined to the islands in the river and to the deep woods along the shores, where it is resident through the year. Even in such places it is no longer abundant, and very few specimens were obtained.

The following twelve species, belonging to the sub-family *Fluvicolinæ* Cab. (*Teniopterinæ* Bp.), form one of the most interesting groups found in the Argentine Republic. To almost all the general habits of Flycatchers they add others peculiarly their own, some of which are not readily explainable.

Not one of them has bright colored plumage, if we except the sulphur-yellow under-parts in two species (*Sisopygis* and *Machetornis*) and a half concealed crown-patch of orange-red in *Machetornis*; yet almost every one possesses some characteristic of form, color, or habit, which makes it conspicuous even to the casual observer. Well-defined areas of black and white mark several species, while peculiarly developed outer tail-feathers, or remarkable eye-lids characterize two others.

48. **Agriornis maritima** (*Lafr. et d'Orb.*).—Only met with a few times in the gorges of the Sierra de la Ventana, where it was sometimes seen perched motionless upon a great block of gneiss, or darting suddenly out after a passing insect.

49. **Tenioptera nengeta** (*Linn.*). ALCAHUETE (a word which unfortunately has no precise equivalent in English, but which, as it refers to the remarkable vigilance and quickness of the bird, may be very liberally translated *sentinel*.)

These birds and the following species (*T. coronata*) appear at Concepcion at the first appearance of cold weather, and remain until spring opens. They are most abundant between April 1 and August 15, but possibly a few of the present species remain through the summer, as a single one was taken September 8, and another on February 11.

They are commonly seen perched on fences or the tops of bushes or trees in open ground, frequently making sallies for winged insects, or dropping to the ground to catch a grasshopper or worm. When shot at while perched and watching you, they almost invariably leave the perch at the flash, pitching forward and downward and usually evading the shot even at short range. Several times I have secured them by shooting about a foot below and two feet in front of them as they sat, but they do not always fly in this direction. Much the surest way of dropping them is to walk up till they fly, and then shoot, as they seldom dodge while on the wing. The rapidity of their flight when frightened, or when quarreling, is simply astonishing. I have seen one chase another for three or four minutes, doubling, turning, twisting and shooting, now brushing the grass and now rising to a height of at least two or three hundred feet, and all the movements so rapid that the eye could scarcely follow them; and at the end of it each would go back to the top of his own chosen weed-stalk, apparently without a feather ruffled.

50. **Tænioptera coronata** (*Vieill.*).—The preceding description is applicable to this bird except that I did not note its presence at Concepcion after September 1 until the following April. This species frequently persecutes smaller birds in a way which seems to imply pure love of mischief. One afternoon in July, when the river had fallen some feet after an unusual rise, I was walking along the lines of drift left by the falling water, and watching the different birds which were picking up insects or other food from the windrows. A score or two of the little chestnut-backed *Centrites* were running about, and here and there a *Tænioptera* was looking quietly on. Suddenly I heard a chirp of distress, and looking up saw one of these small birds apparently making every effort to escape from a *Tænioptera*, which was following in full chase. The two birds were hardly a length apart and both going at full speed, doubling and dodging in a way that would have done credit to a bat. The chase lasted perhaps half a minute when the smaller bird alighted and at once the other also alighted and began running about unconcernedly and picking up food. But the instant the smaller one made a start, his enemy was at his heels (or more properly his tail) again, and he was forced to alight. This was repeated so often that I was on the point of shooting the pursuer, when without any notice he flew quietly off and resumed his usual demeanor. Afterwards I saw the same proceeding quite frequently—the tyrant being in every case *T. coronata* (except once when I think it was *nengeta*), but the victim was personated at different times by certainly four or five different species; all small, but all very strong on the wing. So far as I could judge, the pursuer never actually touched the pursued; nor did he ever appear to stop, or pick up anything which the other might have dropped. It looked like a case of simple spite, for even if there were twenty other birds about, one seemed to be selected and followed without regard to the rest. Moreover, neither species was nesting, for this occurred in mid-winter, and while the *Centrites* was in flocks, and if it were only from pugnacity there would seem to be no reason why other birds should not share in the attention.

My only explanation is that it was an *amusement* in which the larger bird indulges simply for the pleasure derived from the exercise of his power.

What becomes of these birds in summer I do not know. None were met with on the pampas during our trip, though another species (*M. rufiventris*), which only visits Concepcion in winter, was abundant about the Ventana in March.

51. **Tænioptera dominicana** (*Vieill.*). — At Concepcion this bird does not occur. It was first seen as we approached the Pampean Sierras. Here among the stalks of the drying thistles, or on the tops of the beautiful pampas grass, it was frequently seen. It has an undulating flight which, taken in connection with its black and white dress, at once suggested a Shrike in unusually fine plumage. At this time (February 4, 1881) they were only seen in pairs or little family parties, were almost silent, and in ragged plumage; but late in March, on the Pigué, we found them in large, scattering flocks, which collected in one place toward evening, and went through with a series of aerial evolutions accompanied with vocal exercises of a varied and entertaining kind, lasting half an hour or more.

I presume this was in preparation for their northward. (or westward?) migration, as we did not see them again after leaving this spot, though equally favorable localities were visited.

52. **Tænioptera irupero** (*Vieill.*). VIUDA; VIUDITA (WIDOW; LITTLE WIDOW). — The snowy plumage of this little bird, only the outer wing feathers and the tip of the tail being black, makes it one of the first birds noticed in going into the country. The name Little Widow, by which it is everywhere known, is very appropriate, though the black edgings are not very conspicuous at a little distance, and I have been frequently assured by sportsmen and even by *gauchos* that there was a bird on the pampas called Novia (Bride) which was of milky whiteness without a single touch of other color.

At Concepcion this species is resident through the year. It was not met with further south than Azul, but at Carhué I heard of the "Novia" as a common bird in summer.

The nest is built very early in the season, often, I think, by the middle of August, judging from the condition of old birds taken then. On August 30, 1880, I saw a pair building a nest, largely of feathers, in the hollow limb of a dead tree, and I afterwards saw others in similar places. I never saw the eggs but was told that they were pure white and unspotted. From statements from another source I had reason to believe that the

eggs were sometimes spotted. The sexes are precisely alike in color, and the young when able to fly differ but slightly in appearance from the parents. From the fact that young unable to fly were taken in November, I judge that a second brood is not infrequently raised. The adults have several of the first primaries remarkably attenuate. Young birds appear to acquire these attenuate primaries only after a complete moult. But I took one specimen which showed one or more primaries with tips of ordinary shape but with a line apparently *worn* into the vane of the inner web so as to mark out distinctly the attenuate tip, and it seemed as if a little more wearing would cut out a piece which would leave the primary as in the old bird.

53. **Myiotheretes rufiventris** (*Vieill.*).—The largest of the family found at Concepcion, where it occurs only in winter. It is found in flocks, the individuals of which scatter about the ground and resemble our common Robins not a little. I have never seen this species alight on a bush or tree,—but as it is not plenty at Concepcion, and as there were no trees or bushes in the region where it was abundant further south, I will not say that it does not often do so.

54. **Alectorurus guira-yetapa** (*Vieill.*). TIJERITA REAL (ROYAL SCISSOR-TAIL).—Only sparingly found at Concepcion, and only during warm weather, when it probably breeds. The remarkable condition of the outer pair of tail feathers is interesting. In the male these two feathers reach a length of nearly ten inches, the rest of the tail being about three inches in length. The vane on the *inner* side of each is wanting for the first two inches and then suddenly develops to a width of nearly two inches, which it maintains almost to the tip when it gradually narrows. The vane on the *outer* side of the shaft is only about one-quarter of an inch wide, and is folded so tightly against the shaft that it is quite inconspicuous. In the only two males of this species which I have seen flying, these long feathers seemed to be carried folded together *beneath* the rest of the tail, and stretching out behind like a rudder or steering-oar, their vanes at right-angles to the plane of the rest of the tail. The only male which I took myself was shot at Carhué, April 6, 1881, and had not quite completed the summer moult. The chin, throat, and sides of head below the eyes were completely feathered. Two males, however, were brought to me at Concepcion, October 7,

1880, which had these parts perfectly bare, and of a bright orange-red color. As this was the breeding season I can only suppose that the feathers are lost from these parts at that time, and not regained until the entire moult takes place. The birds seem to prefer high grass and weeds in wet open ground.

55. **Sisopygis icterophrys** (*Vieill.*).—Not uncommon in open woods and bushy places through the entire year. A nest found December 24 was a rather shallow affair, built of twigs, weed-stalks, etc., and lined with wool and soft vegetable materials. It was placed on the horizontal branch of a bush overhanging the water, on the edge of a swamp, and contained three eggs nearly ready to hatch. Their color was white, with a few (in one case only five or six) large dots and splashes of brown.

56. **Cnipolegus cyanirostris** (*Vieill.*).—Apparently only a migrant, as but three specimens were taken, one September 29, 1879, and one each on September 26 and 29, 1880.

57. **Lichenops perspicillatus** (*Gm.*). VIUDITA NEGRA (LITTLE BLACK WIDOW).—Abundant at Concepcion in summer and many winter there. The plumage of the adult male is glossy black, the outer primaries alone being partly white. This would make a very pretty little "widow" did not the yellow appendages or outgrowths on the eye-lids give the bird such a grotesque appearance. They are bright yellow, as are also the irides and bill, so that even at long range it is impossible to mistake the bird for any other. They frequent the tall grass and reeds in wet places and are never found far from water. While they frequently go to the ground for insects, and even hop about there considerably, they only seem really at home when swaying on the long grass or perched on the top of some swamp shrub. In warm, quiet weather, even in winter, the male has a habit of flying perpendicularly upward from such a perch and returning again instantly. So quickly is the action performed that although he must rise to a height of ten or fifteen feet, not more than a single second is occupied in it. It looks precisely as if the bird were shot up by a spring and pulled back by an elastic, as in the case of a toy return-ball. A little quavering whistle is heard at the same time, and I suspect it is partly due to the action of the wings. The performance is doubtless an act of display for the benefit of the female, or a challenge to other males. It cer-

tainly is not for the purpose of catching insects, which are taken in the ordinary manner.

A nest found October 2, 1880, contained two fresh eggs, probably an incomplete set. They were white, with heavy brown spots scattered sparsely over the larger ends. The nest was neatly hidden in a wet tussock on the edge of a swamp. It was very deeply hollowed, formed of fine grass and a little hair and feathers, and the lip or border was covered with green moss.

The species was met with at all points visited, but south of Azul not a single male in the black plumage was seen, though the brown birds (presumably females or young) were met with almost every day for nine weeks, and frequently in large numbers. Of course I began to suspect that the males must moult into a brown suit after nesting, as do our Bobolinks and many other birds, but I shot specimens at various times, and all proved to be either females or young males, and as I was confident that at Concepcion black males were to be found through the year, I was at a loss for an explanation, and am so still.

58. **Machetornis rixosa** (*Vieill.*).—Occurs sparingly through the winter at Concepcion, and a few may remain to breed. Not elsewhere noted. On July 30, 1880, I found a small flock among trees on a slope close to the edge of a meadow. They were quite unsuspicious and I watched them some time before shooting any. In moving from place to place they kept together and first alighted on trees, afterward going down to the ground where they ran about as easily and gracefully as Thrushes. Their general appearance, even to points of color, so strongly suggested a true *Tyrannus* (e. g., *T. melancholicus*) that their easy motion on the ground was rather surprising until you noticed that their legs did not justify such a comparison. During the warmer weather the few which remained seemed to be solitary.

59. **Centrites niger** (*Bodd.*).—One cold, misty morning, the last of April, a few of these birds made their appearance at Concepcion. They gradually increased in numbers until July, when they were very abundant everywhere in open ground. The adult males were jet black with a patch of chestnut in the middle of the back. The females and young of the year were dull ashy inclining to tawny, and as the time wore on the feathers wore off and many of the dull colored birds were metamorphosed into good-looking males in spring plumage. I think this is

one of the most restless birds I ever saw. You cannot depend upon him to be in the same place two consecutive half seconds. He runs like a Sanderling, and whenever he keeps his feet still by accident, his wings are flirled in a way that shows his anxiety to be off. Several are usually found together, and sometimes a loose flock of a hundred or more is seen. They are very strong on the wing, sometimes mounting rapidly for several hundred feet, if suddenly startled, and after a few moments spent in circling like a Snipe, they drop again almost as suddenly as a shot, and as if from the very clouds. They became scarce at Concepcion during August, and by the 10th of September none were to be found there. At Azul, February 1, 1881, they were very plenty but in poor plumage, and we continued to see them in all suitable places until our return to Buenos Aires early in April.

Their note seemed to be only a sharp chirp. Of their breeding habits I know nothing.

(To be continued.)

BIRD NOTES FROM WESTERN ONTARIO.

BY T. MCILWRAITH.

The winter of 1882-83 will be remembered in Western Ontario by those who are fond of observing the movements of our native birds as the one in which the Pine Grosbeaks were so plentiful. The visits of these northern strangers are by no means regular; sometimes a few pairs will be observed during January or February, and again they will be absent altogether for several years in succession, but on no previous occasion have they ever appeared in such numbers or stayed so late in the season as during the winter now drawing to a close. They were first observed in the shrubberies in and around the city about the 10th of January, and almost simultaneously with their arrival here there appeared notices in several country newspapers of the "arrival of flocks of strange birds, mostly of a smoky grey colour, but sometimes having a leader clad in glowing crimson."

While here they kept in small flocks, seldom exceeding eight in number, the proportion of adults in crimson dress being about one in twenty. Their forenoons were usually spent in feeding on the berries of the mountain ash, wherever they could be found; they were in the most frequented thoroughfares; and where the trees overhung the streets, the sidewalks were soon littered with the pulpy part of the berries, the birds using only the hard seeds. As the season advanced the supply of berries gave out, and they then resorted to the buds of the larch, and also fed freely on the fruit of such apples as they found still hanging on the trees in the orchards. In the afternoon they retired to the evergreens for rest and shelter. While here they showed the most gentle, sociable disposition, enjoying each other's company and keeping up communication by a series of soft call-notes. Occasionally, when all was still, a male would indulge in a low, soft warbling song of considerable duration, which I could fancy might be delightfully soothing in the stillness of a sick chamber, but too low to be appreciated by human ears under ordinary circumstances.

Toward the end of February the weather softened a little and the birds all left. This mild spell, however, was followed in a few days by a north-easter, accompanied with snow and sleet. Before it broke the birds returned again and sought their former shelter among the evergreens. This occurred on three successive occasions, but each time they returned in smaller numbers, and after the first departure none in the red plumage were seen. As late as the first of April a few were observed in the city, but they were evidently in transit and, calling loudly for company, seemed anxious to be off.

I think it quite probable that the peculiarities of the weather this season may have brought birds together which never saw each other before; at all events, it was a most unusual thing for us to see Pine Grosbeaks, Meadow Larks, Robins, Crossbills, Redpolls, Bluebirds, Song Sparrows, Tree Sparrows, all in one short excursion.

Being desirous of securing a few Grosbeaks where it could be done without breach of the city by-law, which forbids the use of fire-arms within the city limits, I made several excursions to the country during the severe weather for this purpose, and also to satisfy myself as to what birds were really wintering with us, and how they fared during the season of unusual severity.

Getting outside the city we at once lost sight of *Passer domesticus*, who has *not yet* betaken himself to the farm-houses, but almost immediately met with another recent addition to our birds which promises ere long to be as abundant in the country as the Sparrow is in the city. This is the *Eremophila alpestris*, Shore Lark. When I first made the acquaintance of this species twenty years ago, the few individuals observed came and went with the Snowbirds, and kept always with them while here. They were stout, well-developed birds, with the black and yellow markings clear and decided. Some ten or twelve years since a new race made its appearance, smaller in size, the colours paler, and having altogether a bleached, washed-out look about them when compared with the others. These have remained permanently, and, increasing from year to year, have now become our most common winter resident in the country. They breed very early by the road sides and in the low commons everywhere, and at this season of the year are seen either running in the road-tracks or sitting in rows of fifteen or twenty along the fences waiting till you pass that they may return to their regular feeding ground.

A ride of several miles through an open country developed nothing of ornithological interest. Sable, silent crows, flying in straight lines to some known point, were common; but the road now leads through several miles of bush containing a large proportion of evergreens, and here, if anywhere in the country, the Grosbeaks will be found. But they were not there; not a single specimen did we either hear or see. In a sheltered hollow, where tamaracks, pines, and cedars were growing thickly together, a noisy little group were enjoying themselves in a state of great hilarity notwithstanding the severe cold to which their fragile bodies were exposed. The Chickadee was apparently the leader of the company, but the Nuthatches were both there, and also the Tree-creeper, and one or two Golden-crested Kinglets, while a little Downy Woodpecker was drumming away on his own account, keeping his company in view all the time.

This ride took in a circuit of twenty-five miles, and we came back without a specimen save a poor emaciated Saw-whet Owl which we found lying peacefully on his back on the snow at the foot of a fence post, from which he probably dropped dead the night before in a fit of starvation.

On the 17th of March I made a similar excursion north of the city into the townships of East and West Flamboro', having for company, as before, the same male member of my family, aged fifteen. These townships are much broken up by cedar swamps and rough, uncleared land. Even at this advanced date the roads leading north and south were blocked with snow as high as the fences, and the farmers had taken down the rails and were traveling for miles through the fields parallel with the road to avoid the drifts. On a bare spot under a low-growing pine which stood in a cleared field, some dark colored little birds were observed hopping about among the fallen cones. A closer inspection showed them to be White-winged Crossbills; and so little did they seem to understand the effects of the gun that we got them all, seven in number, without leaving the tree. The males had partially assumed the red plumage, and the females were, as usual, green with white bars.

A few Pine Linnets were next obtained, and shortly afterwards, while passing through a swamp of mixed timber my companion had wing-tipped a Nuthatch, and was floundering through the deep snow in pursuit, when I saw him suddenly turn and fire in an opposite direction. In reply to the usual question, "What have you got?" the answer came back, "An Evening Grosbeak." Leaving the horse in the tracks I found that such was really the case, but, under fear of missing so rare a chance, he had fired too close and almost destroyed it. The call of another was still heard among the tree-tops, and in a few minutes I saw an Evening Grosbeak alive for the first time. I can't say my hand was quite steady, but I brought him down, with outstretched, quivering wings, with a single pellet through his head,—a bad place for a bird to be hit that is wanted for preservation, but in this case a little extra care was all that was needed to make a good mounted specimen. Both were young birds in the plumage of the female, and seemed as if hardly recovered from the first moult.

In the month of May, 1863, a few specimens were obtained near Woodstock, and again in May, 1871, I got three which were shot near London, but these are all I have ever heard of being found in Canada; and from the list of birds recently published by Messrs. Saunders and Morden of London, these dilligent collectors do not seem to have met with this species, which may be regarded as purely accidental here.

This ride took in a circuit of twenty miles, and convinced us that though the number of resident birds to be met with in winter is very small, yet there is always the chance of meeting unexpectedly something very rare and desirable. We were also quite satisfied that while here the Pine Grosbeaks do not remain in the bush, but keep by the towns and villages where they find the berry-bearing trees and bushes, especially the mountain ash, which yields their favorite fare.

NOTES ON SOME OF THE WINTER BIRDS OF MASSACHUSETTS.

BY HERBERT K. JOB.

It has been my privilege for several years past to enjoy many opportunities for observing the habits of the birds found in Eastern Massachusetts, and being less engaged during the winter season than at other times, I have been enabled to become rather better acquainted with the birds found then than with those seen at other times. Last winter (1882-83) was quite interesting as regards its feathered creatures, and it is my purpose in this article to refer to such of our visitors during that season as may be of interest to the readers of the *Bulletin*, and also to give some notes relative to past seasons.

All collectors in this section must have noticed how promptly most of our winter birds arrived last year; so, although my subject is winter birds, I shall have to begin back as early as October. The 11th of that month brought immense flocks of Pine Finches, some flocks containing as many as three hundred individuals. They remained mostly in localities where cone-bearing evergreens grew more or less plentifully, and were abundant until early in November, when they suddenly disappeared. A few scattering ones were seen in February, but scarcely any until a short time since, when quite a number appeared in my garden in Roxbury, feeding invariably in a small row of larch trees. Many of them were single birds, and none were

seen in parties of more than three or four. A number were shot, but others kept coming. This was May 8 to 11 inclusive, since which time no more have appeared.

Horned Larks came October 20, followed in three days by the Snow Buntings. Both of these usually retire northward early in March, but on May 27, 1882, I started a Horned Lark almost from under my feet on a rocky beach at Scituate. No nest was to be found, and whether it was breeding or not, I cannot say.

Crossbills of both species arrived November 4, and were found sparingly until late in February. It was my good fortune a short time ago (May 12) to meet a flock of five or six Crossbills in a grove of tall pines in Brookline, from which I secured two White-wings (*leucoptera*), adult male and female. Upon dissection it was evident that they were not breeding. What could have brought them here at this time?

Ipswich Sparrows can at last be ranked almost as common birds upon our seacoast in the late fall. Last year I saw them first on October 28, in Boston Harbor, and for about a month found more specimens than I could possibly desire to shoot. The main body leaves us late in November, but stragglers are occasionally found during the winter.

The first snow fell November 17. I was on an island in Boston Harbor the next day, where I met with an unlooked-for bird. As I was crossing the island I was surprised to see a shore-bird running over the snow, beneath which lay a mud-flat, a former resort for such birds. I had no difficulty in shooting the stranger, which proved to be a Killdeer Plover (*Ægialites vociferus*). The day was bitterly cold, and although these birds are known to linger here quite late at times, it is surprising that the delay in the present instance was not fatal. A week before this,—on the 11th,—I secured a Short-eared Owl on this island, which started up from a potato field as I approached.

The Pine Grosbeaks were later than the other birds in putting in an appearance. The first, as far as I know, came on November 23; still they were scarce for a couple of weeks, but from that time up to the middle of February they were one of our most common birds. They then grew scarcer, but were seen until March 10.

November 25 brought the Snowy Owls, which were not uncommon during most of the winter, especially the early part.

I did not see any Rough-legged Hawks myself, but a friend received one from a farmer's son, which the latter had shot as it sat perched on the chimney of his house one cold day in December, — perhaps to get warm. Another good capture was a Hermit Thrush, which I took on Christmas day in a pine grove, in company with a flock of Robins.

I have been interested for the last few years in noticing the irregular movements of our Nuthatches in winter. One season both kinds were present; another followed in which the White-bellied species (*carolinensis*) was common, but in which no Red-bellies (*canadensis*) were seen. I did not see one of either kind during the whole of the next winter, but in the last the Red-bellies were abundant, while the others hardly occurred at all. The cold evidently does not drive them from us, for it is during the severest winters that they seem to remain. What then does influence them?

Last winter was, as all know, a very cold one, and considering this I was much surprised to learn from a friend that on January 3 he met with a flock of some five or six Bluebirds near his home in Sharon. The winter before would have seemed more favorable for their occurrence.

I wish now to speak of that season (1881-82), which was rather exceptional as regards its birds. The weather being very mild and warm, few northern birds were found as far south as this State, while on the other hand some of the more southern species, such as seldom remain with us during the winter months, were more often noticed. Pine Grosbeaks, Crossbills, and Redpolls were altogether absent, but in their place flocks of Purple Finches roamed about the country; also Goldfinches, Robins, Jays, Golden-winged and Downy Woodpeckers and other such birds were much more frequently seen than is usual. The Sharp-shinned Hawks seemed to take advantage of this state of affairs, and remained here in force. On several occasions I saw them in the densely populated parts of Boston, and once I saw one fly boldly up to the window of a house, as if seeking something within.

I do not remember having known of a Great Blue Heron here in winter before, but last year, late in December, I observed one on an island in Boston harbor, where it was feeding in a marsh. Happening to revisit the island about the first of January, I met

the Heron again, feeding in the same spot. Another bird that I did not expect to see was the Red-headed Woodpecker. Numbers of them had been seen during the fall, but about the first of December most of them disappeared. Still some remained, and were seen in Brookline during the entire winter, not leaving us until the middle of April.

On February 4, while a severe snow storm was raging, I met another straggler. This was a Fox-colored Sparrow. I never took one before in winter, and think that their appearance in that season is exceptional. Another one, the second that I have known of, was taken February 17, by a friend.

Of course, even in a very mild winter, no great number of birds such as I have just been mentioning are found. No one notices them except the collector, and he only a stray one or two now and then. Some other instances of such wandering it might be well to speak of. In January, 1880, a friend of mine was skating on a pond where a number of men were engaged in cutting ice, when he noticed a curious looking bird sitting on the edge of the ice in a rather dazed manner, not heeding at all the presence of the workmen. He went for a gun, returned, and shot the bird, which I ascertained was a Black Guillemot. There had been a severe northeast storm the day before, and the poor creature had evidently got lost.

Another victim to a northeaster was a Woodcock, one day late in November last. This incident was also observed by a friend, who while passing along one of the streets of Boston, while a gale was blowing and the snow falling thickly, saw a Woodcock shoot down the street, borne on the wings of the wind. The unfortunate bird passed within a few feet of him, rendering identification certain. Nothing more was heard from it, so it is probable that it escaped in safety from the city.

It is not an uncommon thing to meet Kingfishers where open water can be found inland. One was noted last February in Brookline, and I have known of one or two more in about twice as many years. Titlarks were an agreeable surprise on February 25, 1882, when I came close upon two as they sat perched upon a rock on Moon Island, Boston Harbor. On February 8, 1879, I found a flock of Rusty Blackbirds in Brookline, where they were feeding in a swamp, there being some ten of them in the flock. Then on the 20th of December of the same year I saw a party

of White-throated Sparrows hopping about in a street, quite near a house

This, I think, will suffice to show the freaks of some of our winter birds. Although our birds are pretty well known, yet, since they indulge in irregular movements in different seasons, much close observation is still needed to make us fully conversant with their modes of life.

LISTS OF BIRDS OBSERVED IN THE VICINITY OF COLORADO SPRINGS, COLORADO, DURING MARCH, APRIL, AND MAY, 1882.

BY J. A. ALLEN AND WILLIAM BREWSTER.

[The field notes of this List are based on the joint observations of Mr. Brewster and myself. The technical notes, in smaller type, are entirely by Mr. Brewster.—J. A. A.]

The area covered by the present list has a radius of about six miles, Colorado Springs being the central point. It therefore embraces the plains immediately adjoining the town, Austin's Bluffs to the northward, the Garden of the Gods, and that portion of Bear and Cheyenne Creeks between the base of the mountains and their junction with Fountain Creek. The places chiefly visited were the wooded bottoms of the two first-named creeks, and Austin's Bluffs. The broken ridges of the latter are scantily wooded with pines, and the intervening narrow ravines by oak scrub.

Excursions were made almost daily from April 7 to May 23, within which dates is included almost the whole period of the spring migration, few birds arriving either before the first date or after the second. The senior author also spent the month of March at Colorado Springs, and the summer at a ranch on West Monument Creek, about twelve miles northwest of Colorado Springs. A few notes are accordingly included respecting the occurrence of certain species of special interest from the fact that their breeding range does not extend below the base of the foothills. The

value of the list consists chiefly in its being a careful record of the arrival and relative abundance of the species coming within this limited area of observation.

The season, it may be added, was exceptionally cold and wet, with frequent falls of snow on the foothills, which on a few occasions extended to the plains, driving down, in several instances, birds which had previously retired to the foothills and lower slopes of the mountains. Probably, also, owing to the unusually inclement weather, many species arrived rather later than usual.

It remains to tender our grateful acknowledgements to Mr. Charles E. Aiken, Colorado's best known and highest ornithological authority, for varied acts of kindness, including many valuable suggestions as to the movements and resorts of birds. A few species of water birds, in each case duly accredited, are included simply on the basis of our seeing them as brought to him by collectors or sportsmen in the fresh state, the few localities near Colorado Springs favorable for water birds not coming within the range of our excursions.

1. ***Turdus migratorius propinquus***. WESTERN ROBIN.—Common. Occasionally seen in small flocks in April and the early part of May. Observed nest-building May 1.

Most of the specimens taken are typical, but one, a fine adult male shot May 20, has the terminal spot on the inner web of the outer rectrices as large and purely white as in most eastern birds. The measurements of this specimen (which fall within the limits assigned to *propinquus* by Mr. Ridgway) are as follows: Wing, 5.40; tail, 4.70; bill from nostril, .52; tarsus, 1.33.

2. ***Turdus pallasi auduboni***. AUDUBON'S THRUSH.—A few were seen about April 13, but no others till May 20, when for a few days they were quite abundant along the creek bottoms, having been driven down from the mountains by a heavy fall of snow.

Our seven specimens all come within the limits of size given for this form by Mr. Henshaw, in his excellent paper on the races of *Turdus pallasi*.* The extremes are as follows: Wing, 3.72-4.05; tail, 3.08-3.20; bill (length from feathers), .54-.56.

Mr. Brown has lately expressed the opinion that "The difference in length of bill exhibited by the three races of this species is almost microscopic," and that "A much more tangible character, not mentioned by Mr. Henshaw, lies in the disproportionate slenderness of the bill of the west-

* This Bulletin, Vol. IV, pp. 134-139.

tern varieties."* In so far as *pallasi* and *auduboni* are concerned I am inclined to agree with the first part of this proposition, but I should apply it also to the proposed new character, which seems to me an equally "microscopic one." Fortunately, however, there is no necessity for "splitting hairs," the differences in general size and coloration between *auduboni* and *pallasi* being readily appreciable.

3. ***Turdus ustulatus swainsoni***. SWAINSON'S THRUSH.—First seen May 8, in large numbers. They continued abundant for several days, and were occasionally observed as late as May 23.

4. ***Oroscoptes montanus***. SAGE THRASHER.—A few were seen April 10 to 15, but none later.

5. ***Mimus polyglottus***. MOCKING BIRD.—One was taken at Austin's Bluffs April 26,—the only one seen. Mr. Aiken informs us that they occur occasionally about Colorado Springs, and that they breed abundantly a few miles to the southward, toward Pueblo, nesting in the cactus bushes.

6. ***Mimus carolinensis***. CAT BIRD.—First seen May 10, and became more or less common in suitable localities a few days later.

7. ***Harporhynchus rufus***. BROWN THRASHER.—First seen May 13, and immediately became more or less common in suitable localities.

8. ***Harporhynchus bendirei***. BENDIRE'S THRASHER.—One was taken May 8 at Austin's Bluffs. (See this Bulletin, Vol. VIII, p. 57.)

9. ***Sialia mexicana***. WESTERN BLUEBIRD.—First seen March 21. Later was more or less common in the creek bottoms till May 10. Large, mixed flocks of this species and *S. arctica* were seen on a few occasions, when heavy falls of snow had driven them down from the foothills. Were found breeding in June on West Monument Creek, down to the very edge of the plains.

10. ***Sialia arctica***. ARCTIC BLUEBIRD.—First noticed about the middle of March, and for some weeks were rather common in all suitable localities—that is wherever there were trees. Were frequent in the town till into April, where they were as unsuspicious and confiding as the common Bluebird is in the East. Later they retired to the timbered creek bottoms, the bluffs, and foothills to pass the breeding season. One or two pairs were reported nesting in the town in boxes provided for their accommodation.

* This Bulletin, Vol. VII, p. 127 (foot note).

During stormy weather in April and the early part of May, particularly when snow covered the foothills or the edge of the plains, they gathered into flocks of fifty to one hundred and fifty or more, of which one-fourth to one-third were *S. mexicana*.

We may add that we heard no attempt at song from either *S. mexicana* or *S. arctica*, in this respect they differing strikingly from the Eastern Bluebird.

11. **Cinclus mexicanus.** DIPPER; WATER OUSEL.—The only one seen was shot April 7, at the mouth of South Cheyenne Cañon.

12. **Regulus calendula.** RUBY-CROWNED KINGLET.—Not uncommon during most of April wherever there was timber. Observed as late as May 5.

13. **Regulus satrapa.** GOLDEN-CRESTED KINGLET.—Several times met with in April, and one was shot May 4. Less common than the preceding.

14. **Parus atricapillus septentrionalis.** LONG-TAILED CHICKADEE.—Infrequently observed in the wooded creek bottoms and at Austin's Bluffs.

Our Colorado specimens of this race are but a trifle larger than *atricapillus* proper, but their tails are relatively longer, and the white of the wings and tail purer and more extended. The most typical examples of *septentrionalis* which I have are from Dakota, where the variety appears to attain its maximum size and whiteness. The difference between Dakota and Colorado specimens is considerable, in fact nearly as great as between the latter and true *atricapillus*.

15. **Parus montanus.** MOUNTAIN CHICKADEE.—A few pairs were seen during March and April; none later.

16. **Sitta carolinensis aculeata.** SLENDER-BILLED NUTHATCH.—Two were shot in April—the only ones seen during our many excursions. A pair observed on West Monument Creek in June were evidently breeding.

17. **Certhia familiaris montana.** BROWN CREEPER.—Several were seen and one was shot April 7. A few were seen on following days, but none later than April.

The single specimen taken is typical of the above variety lately instituted by Mr. Ridgway.

18. **Salpinctes obsoletus.** ROCK WREN.—A single specimen was shot April 17, but no others were seen for ten days, when they suddenly became abundant, and for a week were to be seen in rocky places everywhere. They were less numerous later, but continued common at suitable localities.

Among our large series are a few specimens which, although in fresh, unworn spring plumage, almost wholly lack the usual dusky streaks of the throat and breast, the entire under parts,—with the exception of the jugulum, where there are a few faint shaft lines of a slightly darker shade than the general plumage—being immaculate. These birds are also unusually pale above, with the dorsal markings faint and few in number. As they were taken during the migration, they may represent a more or less local desert type, or the variation may be simply an individual one. I do not find it mentioned in previous descriptions. All of the Colorado specimens are very much grayer than some which I have from California.

19. **Catherpes mexicanus conspersus.** CAÑON WREN. — Heard April 10 in North Cheyenne Cañon; specimens were taken a little later in the Garden of the Gods.

20. **Troglodytes aedon.** COMMON WREN. — First seen May 5; a few days later they became common.

Colorado certainly *ought* to furnish true *parkmani*, but of the seven House Wrens which I collected there only two fulfil the requirements of that race. The others are neither grayer nor more distinctly banded than average eastern birds, from many of which they are practically indistinguishable. The comparative length of the first primary in the two forms is the only character which seems to possess any approach to stability, and this is not to be depended on. In short, the views which I have lately expressed* regarding the instability of the race *parkmani* are strengthened by the study of this fresh material.

21. **Telmatodytes palustris paludicola.** LONG-BILLED MARSH WREN. — A single specimen was shot on the Fountain, near Beaver Ranch, April 22. This was the only one seen, but we were at no other time at a suitable locality for them.

22. **Anthus ludovicianus.** TIT LARK. — A few small flocks were seen during the last week of April.

23. **Helminthophila virginiae.** VIRGINIA'S WARBLER. — Single individuals were heard May 1 and 2, and a specimen was taken May 3. A few days later they became common, and throughout the month were more abundant than any other Warbler. They are partial to the oak scrub, where they breed, but were also more or less frequent in the cottonwoods of the creek bottoms. Are quite shy and difficult to capture for so small a bird, keeping closely concealed in the thick scrub, though very active.

A series of about fifty specimens illustrates certain variations of plumage which do not seem to have been previously noted. For instance: Both Dr. Coues and Mr. Ridgway describe the adult male as having the yellow

* See this Bulletin, Vol. VII, p. 82.

beneath confined to the tail-coverts and an isolated patch on the breast or jugulum. With the specimens before me, however, this is the exception rather than the rule. In the majority the yellow extends uninterruptedly from the breast to the chin, paling anteriorly until it fades into white near the base of the lower mandible. In a few examples it is nearly as bright on the throat as over the middle of the jugulum. In one very highly-colored bird a narrow ashy collar passes across the jugulum separating the yellow into two distinct patches, one of which occupies the throat, the other the upper portion of the breast and the lower part of the jugulum. This bird is peculiar also in having the orbital ring strongly tinged with yellow.

Mr. Ridgway says * that the chestnut patch on the crown "is obsolete in the female"; Dr. Coues, that it is present but "more restricted than in the ♂."† The latter statement is the more nearly correct, for among the twelve females that I have examined not one has the crown entirely plain, although with a few the chestnut is pale and restricted to the central feathers. In the fully adult bird it is not less deep and extended than with average males, and the yellow of the breast and under tail-coverts is sometimes quite as rich as in some of the duller males. The latter, however, can be usually if not always distinguished by the darker ash of the head and the brighter yellow of the rump.

The crown-patch of the male varies little in color or extent, but it may be nearly or quite concealed, or conspicuously exposed, according to the condition of the plumage. The feathers of the crown, when fresh, are tipped with ashy, so that when each is in its proper place the chestnut beneath is perfectly covered. With the advance of the season, however, the ashy tips rapidly wear away, and with birds taken after the middle of May the crown-patch is a conspicuous feature. It may be always seen by disarranging the feathers.

24. **Helminthophila celata.** GOLDEN-CROWNED WARBLER.—First met with April 28. A few were seen almost daily till late in May.

Among a fairly extensive series of Orange-crowned Warblers I find two well-characterized and readily separable races, one a dark greenish-olive bird coming from Florida and Georgia, the other a bright yellowish form, the extreme of which is represented by specimens from California. The latter, it is perhaps needless to say, is variety *lutescens*, supposed to be restricted to the Pacific Slope.

Specimens from Texas and Minnesota are paler and less yellowish than California ones, but on the whole more nearly like them than they are like the Florida examples. Still closer to *lutescens* are my Arizona and Colorado representatives, several of which are so nearly identical with even the brighter California birds that it is practically impossible to distinguish them. The general evidence of this series shows a barely appreciable paling of the yellow in the Colorado and

* North Am. Birds, Vol. I, p. 199.

† Birds Col. Val., Vol. I, p. 221.

Arizona birds as compared with those from California, a still further and rather more decided diminution of this color in the Texas and Minnesota ones, and an abrupt and very wide gap between the latter and the dark greenish-olive Florida specimens.

If the geographical variation among the representatives of the region at large west of the Mississippi is always as trifling as in the series before me, little violence would be done by uniting *lutescens* and *celata* under the latter and prior name.

But whatever the disposition finally made with the western forms, there seems to be no reason why the dark bird found in the Southern Atlantic States should not be recognized as a distinct variety, for it differs more from *celata* than the latter does from *lutescens*. Mr. Ridgway called attention to some of its peculiarities in "North American Birds" (Vol. I, p. 202), proposing to distinguish it under the name *obscura*, but as he unfortunately claimed among its characteristics the absence of certain markings (*i.e.*, the "orange" crown-patch and white spots on the outer rectrices) which it has been since shown to normally possess, the variety fell into disrepute, having been latterly ignored even by Mr. Ridgway himself. Believing that it really deserves a distinctive name I take the present opportunity to reinstate it under the following diagnosis:—

Helminthophila celata obscura RIDGWAY. SUBSP. CHAR. Differing from true *H. celata* in being darker and dingier, especially beneath, where the usual yellowish tinge is replaced by a greenish one.

♂ adult (No. 1800, Coll. W. B., St. Mary's, Georgia, April 7, 1877). Above dark greenish-plumbeous; beneath dingy greenish-olive, darkest on the sides, palest on the middle of the abdomen; sides of head and neck scarcely lighter than the back; eyelids and a short, ill-defined superciliary stripe greenish-yellow; a concealed crown-patch of deep orange-rufous; inner webs of outer tail feathers narrowly margined with white near their terminal ends.

♀ adult (No. 1801, Coll. W. B., Mellonville, Florida, March 14, 1877). Lacking the rufous crown-patch; otherwise similar to the male.

Habitat. Georgia and Florida in winter and early spring, perhaps migrating northward to breed.

Audubon figured this race, and his plate even exaggerates its peculiar dark coloring. It is probable that his specimens were taken in Florida, although he does not state that such was the case. I have seen no examples from the Mississippi Valley east of the Mississippi River, but Mr. Ridgway says (North American Birds, Vol. I, p. 202) that "specimens from Southern Illinois . . . and from Wisconsin are precisely like Rocky Mountain examples." Two Massachusetts ones before me are doubtfully referable to var. *obscura*. Both are somewhat lighter than Florida specimens although darker and greener than Texas or Minnesota examples. As they are in fresh autumnal plumage, in this respect differing from any others that I have, I cannot decide upon their precise relationship.

There seems to be some mystery, by the way, as to where these south-

ern birds breed. They are not uncommon in Georgia and Florida during the winter and early spring, but they apparently depart before the end of April. To the northward of the Carolinas in the Atlantic States the Orange-crown, of whatever race, is very rarely seen, while the migrants that pass up the Mississippi Valley are said to belong to the typical (*celata*) form. Possibly *obscura* will be found to summer among the little-known mountains of Georgia and the Carolinas. In such a case it will probably turn out to be a very local form.

25. ***Dendroeca æstiva*.** YELLOW WARBLER.—First seen May 6; they soon became frequent in the town and in the willows and cottonwoods of the creek bottoms, and continued more or less common.

26. ***Dendroeca townsendi*?**—Three black-throated green Warblers were seen on Bear Creek, May 19, which could not be certainly distinguished from *D. virens*, but from the known range of the two species are more likely to have been *D. townsendi*. Having no gun at the time prevented their proper identification.

27. ***Dendroeca coronata*.** YELLOW-RUMPED WARBLER.—The first specimen was shot April 25. It afterwards became not uncommon, associating with *D. auduboni* and remaining for two or three weeks.

28. ***Dendroeca auduboni*.** AUDUBON'S WARBLER.—First seen April 28—a single male. Afterwards they were seen almost daily, and became fairly abundant about May 8, frequenting the shade trees and gardens of the town, as well as the creek bottoms and bluffs. Continued common till about May 16, and were last seen May 20.

29. ***Dendroeca striata*.** BLACK-POLL WARBLER.—A single one was seen May 8, and one was shot May 9, both at Austin's Bluffs, and the only ones seen. Mr. Aiken regards them as of regular occurrence but rare.

30. ***Geothlypis trichas*.** MARYLAND YELLOW-THROAT.—A single specimen was seen and taken April 13; no others were seen till May 10, after which they were more or less frequent in suitable localities.

In a recent paper on Arizona birds I called attention to certain peculiarities in western examples of this species, peculiarities already noted by previous writers, but by them regarded as too inconstant to warrant the separation of a new race. Since that time, however, I have examined a number of additional specimens, and among these the characteristics which distinguish western from eastern birds are so well maintained that I feel justified in instituting the following variety:—

Geothlypis trichas occidentalis var. nov. CH. SUBSP. Similis *G. trichæ* sed cauda longiore; colore suprâ pallidior et flavior; colore infrâ magis flavicante et extento; alba striga in pileo latiore et puriore.

♂ adult (No. 5550, Coll. W. B., Truckee River, Nevada, May 4, 1881). Upper parts nearly uniform pale yellowish-olive, with a tinge of brown on the occiput; throat, jugulum, breast, anterior portion of abdomen, and under tail-coverts rich, pure yellow; sides of body warm ochraceous brown strongly tinged with yellow; middle of abdomen anteriorly creamy white; a black mask on the front and sides of the head bordered behind by a broad band of creamy white, slightly tinged with bluish; much concealed yellow on the feathers of the crown.

Dimensions: Wing, 2.32; tail, 2.30; culmen, .55.

Habitat: Pacific and Middle Provinces of the United States.

The differences which distinguish this race from *trichas* proper, although somewhat difficult of description, are readily appreciable upon a comparison of specimens; they may be briefly summed as follows: *Occidentalis* is somewhat larger than *trichas* and its tail is disproportionately longer. Its upper parts are always paler and usually yellower; the yellow of the under parts is decidedly richer and purer, and extends much further down on the abdomen, frequently tinging nearly all of the body beneath; the flanks are paler and more ochraceous; the white of the head purer and generally broader.

I have not seen var. *melanops* of Mexico but judging from descriptions the present race approaches it rather more closely than it does *trichas*. A decided approach is furnished by a specimen from Cienega Station, Arizona (No. 5906), which is even yellower above than my type of *occidentalis*, while the yellow of the under parts extends over nearly all the abdominal region and strongly tinges the flanks. This bird agrees very closely with Baird's description of *G. melanops* but is considerably smaller. In my paper on the Arizona collection I referred it to *G. trichas*, but I am now inclined to consider it an intermediate between the present race, *occidentalis*, and *melanops* of Mexico.

31. ***Geothlypis macgillivrayi*.** MACGILLIVRAY'S WARBLER.—First seen May 4. Soon became frequent, and continued more or less common in willows along creek bottoms till the end of the month.

32. ***Icteria virens*.** YELLOW-BREASTED CHAT.—First observed May 13; others seen and heard on following days.

33. ***Myiodiocetes pusillus pileolatus*.** BLACK-CAPPED FLYCATCHING WARBLER.—First seen May 12; of frequent occurrence later in willow thickets along streams.

34. ***Setophaga ruticilla*.** REDSTART.—First seen May 18. Not common.

35. ***Pyrranga ludoviciana*.** LOUISIANA TANAGER.—Arrived in large numbers May 12, and continued common.

36. **Hirundo erythrogastra horreorum**. BARN SWALLOW. —First observed May 2; frequently seen later. Not abundant.
37. **Tachycineta thalassina**. VIOLET-GREEN SWALLOW. —First seen May 4. A considerable number observed on the 14th, and at frequent intervals later. In July and August large numbers were seen near West Monument Creek, where they outnumbered all the other Swallows.
38. **Tachycineta bicolor**. WHITE-BELLIED SWALLOW. —Not seen in spring, but a pair was observed in June, nesting on the West Monument.
39. **Petrochelidon lunifrons**. CLIFF SWALLOW. —First observed about May 18, but doubtless arrived somewhat earlier. Small parties frequently seen on the wing later. On the West Monument late in summer it ranked next to the Violet-green Swallow in numbers.
40. **Stelgidopteryx serripennis**. ROUGH-WINGED SWALLOW. —First observed about May 10, and not uncommon later.
41. **Myiadestes townsendi**. TOWNSEND'S SOLITAIRE. —One shot April 14, and a few others seen on following days. They appeared in large numbers on April 29, evidently forced down from the mountains by a heavy snowstorm, and were everywhere abundant, even frequenting open fields near thickets. A few were seen the next day, but none afterward.
42. **Vireo gilvus**. WARBLING VIREO. —First taken May 16; frequently seen later, but was by no means common.
43. **Vireo solitarius plumbeus**. PLUMBEUS VIREO. —Two obtained May 3; seen at intervals later, but not common.
44. **Lanius borealis**. NORTHERN SHRIKE. —Seen a few times in March.
45. **Lanius ludovicianus excubitoroides**. WHITE-RUMPED SHRIKE. —Not common. First seen April 29, and single pairs were met with later. Nest with eggs taken May 23.
46. **Carpodacus cassini**. CASSIN'S PURPLE FINCH. —A few were seen in the vicinity of Cheyenne Creek during April. Last observed about April 23.
47. **Loxia curvirostra mexicana**. RED CROSSBILL. —A flock of about thirty individuals was seen at Austin's Bluffs April 26. A few were noticed here and elsewhere at both earlier and later dates.

Although evidently not typical *mexicana*, our specimens approach that form, both in respect to general size (the longest wing among six exam-

ples measures 3.75 inches) and in the unusual length and thickness of the bill. The character upon which Mr. Ridgway lays special stress—viz., the equal size of the upper and lower mandibles in *mexicana*—is not maintained among them, however, the under mandible being, as in *americana*, decidedly weaker than the upper. The reference of such intermediate specimens is, necessarily, largely a matter of opinion, but on the whole, the present birds seem to be nearer *mexicana* than to the typical *americana* of the East.

48. **Chrysomitris pinus.** PINE FINCH.—One of the most abundant species, occurring everywhere in and near the wooded creek bottoms, and wandering thence to outlying thickets and hillside scrub, usually in small scattered parties, but sometimes massing into dense flocks numbering hundreds of individuals.

49. **Chrysomitris tristis.** GOLDFINCH.—Seen at intervals in small flocks during May, usually in or near town. Were common during summer.

50. **Chrysomitris psaltria.** ARKANSAS GOLDFINCH.—Noticed a few times and one shot on the West Monument in July. Not seen in May; probably arrive about June 1.

51. **Centrophanes ornatus.** CHESTNUT-COLLARED LONGSPUR.—A small flock of about twenty individuals was met with near town May 9, of which five were shot. No others observed.

52. **Rhyncophanes maccowni.** MACCOWN'S LONGSPUR.—A single specimen was shot May 9, from the above-mentioned flock of *Centrophanes ornatus*. No others were recognized.

53. **Passerculus savana alaudinus.** WESTERN SAVANNA SPARROW.—A few were seen, chiefly about the outskirts of the town, during the last half of April and the early part of May.

(To be continued.)

Recent Literature.

STEARNS AND COUES'S "NEW ENGLAND BIRD LIFE." Part II.*—The appearance of the second volume of this book has been doubtless greeted

* New England Bird Life: being a Manual of New England Ornithology. Revised and edited from the manuscript of Winfrid A. Stearns, Member of the Nuttall Ornithological Club, etc. By Elliott Coues, Member of the Academy, etc. Part II. Non-oscine Passeres, Birds of Prey, Game and Water Birds. Boston: Lee & Shepard, Publishers. New York: Charles T. Dillingham. 1883. 8vo. pp. 409, 88 woodcuts.

with pleasure by many who have feared the fatality which seems to prevent most authors from reaching the Water Birds. But despite some interruptions feelingly alluded to in the introduction, Dr. Coues has gone bravely on with the task of "editing" Mr. Stearns's manuscript, and the finished work, now complete in two volumes, is the gratifying result.

Much that we said—whether of praise or censure—in our extended review of Part I will apply equally well to Part II; hence the present task is materially lightened.

Part II takes up the subject with the Non-oscine *Passeres*, and carries it through the remaining Land Birds and all the Water Birds, thus completing the treatise. It embraces 409 pages, of which 7 are devoted to an index of the second volume only, and 6 to an introduction of more general character. The main body of Part II comprises some 390 pages, or about 120 more than the corresponding portion of Part I. Despite this fact, the biographies, as a rule, are rather briefer than in Part I, the large number of species remaining to be treated rendering strict condensation necessary to bring the volume within its assigned limits. Still the habits, distribution, etc., of many of the birds—especially the more interesting ones—are usually sufficiently elaborated to accord with the general plan of the work, and the records relating to the rarer kinds are almost always exhaustively collated. The bringing together of these records—in connection with which the editor acknowledges his continued indebtedness to Mr. Purdie's researches—is one of the most prominent, as it certainly is one of the most valuable features of the book.

We are glad to notice an increased conservatism on the part of the editor in applying dubious or incomplete data to the determination of the comparative abundance and seasonal distribution of the less-known birds. In fact, throughout the first portion of the volume the evidence seems to have been weighed with sound judgment, and, in the main, with unimpeachable accuracy. But among the Water Birds there are rather frequent evidences of hasty, and often positively incorrect conclusions. At least we venture to assert that no intelligent sportsman or collector who has had an extensive experience on our shores or waters will agree to the following rulings:—

(1) That the Golden Plover regularly makes even a "flying visit" to New England in the *spring*.

(2) That the Willet is one of the "species . . . which regularly and plentifully summer in some portion of New England."

(3) That the Gadwall Duck occurs "during the migrations with some regularity," or that it "very probably breeds in the swamps of Maine."

(4) That the Blue-winged Teal is less numerous than the Green-winged Teal.

(5) That the Harlequin Duck is *only* "an extremely rare winter visitor" to New England.

(6) That the Ring-bill is a "common winter Gull."

(7) That either the Leach's and Wilson's Petrels, or the Greater and Sooty Shearwaters, are regularly found off our coast in *winter*.

Without going into details of evidence, for which there is no present space, we may say briefly there are good and sufficient reasons for characterizing the occurrence of the above-named species as follows:—

(1) The Golden Plover is an abundant late summer and early fall migrant, rarely if ever visiting New England in spring.

(2) The Willet is a regular but uncommon spring and fall migrant, breeding sparingly and locally in Southern and perhaps also in Northern New England.

(3) The Blue-winged Teal is an abundant fall migrant; a rather rare spring one. The Green-winged Teal is never abundant, but it is of regular occurrence during the spring and fall migrations.

(4) The Gadwall Duck does not occur regularly at any season; on the contrary it is very rare and probably only an accidental visitor. Much confusion has been caused by the assumption that the Gray Duck (*i. e.*, Gadwall) of the books is the same with the "Gray Duck" of New England gunners and sportsmen. The latter is always the Pintail.

(5) The Harlequin Duck is regularly common in winter on the coast of Maine, where, however, its distribution seems to be very local. A few are also taken nearly every season along the Massachusetts coast.

(6) The Ring-billed Gull is an uncommon bird at any season. It is not known to winter, the few specimens taken occurring in spring or fall.

(7) The Wilson's and Leach's Petrels, with the Greater and Sooty Shearwaters, are summer residents off the coast, leaving for the South before cold weather sets in, and returning rather late in spring.

The Hutchins's Goose, once more given for New England, has, we believe, only a doubtful claim to such distinction. Alleged specimens are not uncommon, but all that we have seen have turned out to be merely small Canada Geese.

The above are only some of the more important rulings wherein we conceive Dr. Coues to be in error. It must be confessed that many of these, as well as some nicer questions which we should similarly criticise, are sustained by the opinions of authors of high repute. It is notorious, however, that much of our published matter on Water Birds is either time-worn tradition, or vague inference;—better than nothing perhaps, yet far from representing the true condition of things with that accuracy which is so eminently desirable.

But while "New England Bird Life" falls short of absolute or even approximate perfection, it is, on the whole, a wisely-conceived and admirably-executed book—by far the best, in fact, which has been so far published on New England birds. As a manual rather than an exhaustive treatise on the subject, it forms a substantial corner stone upon which more extensive structures may be built. The field still offers abundant opportunities, but the crowning triumph is not to be won by an amateur of limited experience. Our literature has already suffered sufficiently in this respect, and the comprehensive "standard" work yet to be written had better be delayed many years than attempted by an incompetent

author. Meanwhile we can get along very well with Dr. Coues's excellent little treatise.

Before concluding, courtesy demands a second reference to the ostensible author of "New England Bird Life." Seeing what any one with eyes *may* see, we can only repeat our former comment, that Mr. Stearns is to be congratulated on his choice of an editor.—W. B.

EVERETT SMITH'S CATALOGUE OF MAINE BIRDS*.—This catalogue is probably the most extended if not the most important ornithological paper ever published by "Forest and Stream." Beginning in the issue of that journal for December 28, 1882, it has appeared by instalments, averaging about a page each, in all the consecutive numbers but two up to that for April 26, 1883, with which it was completed. Its scope and plan are thus briefly defined by the author in his introduction: "Although this catalogue is intended to be merely a popular list of the birds of Maine, I have endeavored to make it of scientific accuracy. Authorities or references are named for such notes as are not within the personal observation or corroboration of the writer."

The system of scientific nomenclature adopted is a curious one. Influenced by the unfortunate but incontestable fact that "no defined rules are adhered to by American ornithologists," and that "there is no exclusive authority for reference in regard to the scientific names of our birds," Mr. Smith hit upon the novel expedient of giving for each species the names that have been used by what he considers the "three foremost authorities" on North American birds; viz., Audubon, Ridgway, and Coues; their respective works referred to being the "Birds of North America," "Nomenclature of North American Birds," and the "Coues Check List and Ornithological Dictionary," 1882. This plan, so far as we are aware, is original. Its general adoption can scarcely be recommended but, in view of the present unsettled condition of our nomenclature, it is probably a useful feature in a paper of the intended popular character of the present catalogue.

In the list proper Mr. Smith has followed the plan usual in faunal papers. The character of the presence of each species is indicated; its local distribution over the state mapped out; and its average time of arrival, if a migratory visitor, noted. In addition, a short account of its habits is usually given. With the land birds, however, these annotations are seldom extended, and it is noticeable that the nesting, eggs, etc., of all but the commoner species are very briefly treated. Such brevity was not unwise if we may judge the author's general knowledge in this department by some of his present statements. Of the many instances that might be selected we have room for only the following: viz., that the eggs and habits of the Winter Wren "are

* The Birds of Maine. With annotations of their comparative abundance, dates of migration, breeding habits, etc. By Everett Smith. *Forest and Stream*, Vol. XIX, Nos. 22-26; Vol. XX, Nos. 1-7 and 10-13.

similar to those of the house wren;" that the Black-throated Blue Warbler "breeds usually in trees;" that the Chestnut-sided Warbler "breeds on trees;" that Wilson's Black-cap Warbler is "only a migrant through Maine;" that the American Goldfinch habitually lays spotted eggs; that the Great Crested Flycatcher "breeds usually on high trees"; etc. A similar and still more curious case of blundering is that of his general overstatement of the number of eggs laid by the smaller birds. For instance, the Vireos, which rarely if ever lay more than four eggs, are in all cases where the number is mentioned, accredited with clutches of "four or five."

But such points are trivial compared with certain really important statements which we have reasons for believing equally mistaken. Among these is a record of the breeding of the White-eyed Vireo in Maine, made on the strength of the author's observation of a pair which "once nested upon one of the upper branches of a maple tree" within a few feet of a chamber window in the heart of the city of Portland. Now every one who is at all familiar with this Vireo, knows that it is a frequenter of retired, swampy thickets and that its nest is rarely if ever placed at a greater height than five or six feet. It is of course dangerous to assume that any exceptional action on the part of a bird is *impossible*, but a case of nesting so unlikely as the above should not be accepted without the most positive proofs of identification. These our author does not furnish, and the way in which he describes the affair shows that he did not appreciate its importance.

Scarcely more satisfactory is the note on the supposed Boat-tailed Grackles seen at Second Lake in Washington County; and we are even inclined to doubt the identification of the Wood Thrush shot by Mr. Smith in 1865; while the Barn Owl collected in 1866, is apparently the notorious specimen which we have Mr. Brown's excellent authority* for now discrediting.

Other cases might be instanced, but such scrutiny is hardly more profitable than gracious. A dubious record is easily made, with difficulty disproved. The most unsubstantial positive statement will stand the shock of much negative testimony. Hence we are often forced to judge an author by the insight that intuition and a few demonstrable cases give us into the general character of his *methods*. Granted that such judgment is *ex parte* and unjust, it is none the less unavoidable. When will ornithologists learn to rate accuracy at its full value?

Passing to water birds it is gratifying to find a better quality of work. Mr. Smith is evidently at home here, and proofs of the general accuracy of his information and judgment are numerous and unmistakable. In fact, with the exception of one or two unsatisfactory notes we fail to detect anything of importance which is open to serious question. Doubtless there are occasional trifling inaccuracies or misconceptions, but on the whole this portion of the list seems to form a really trustworthy presentation of the subject—one of the best, perhaps, that has so far appeared.

* See this Bulletin, Vol. VII, p. 58.

fair, however, to judge their reappearance by their original character, all of them having been carefully revised and to some extent rewritten. The improvement is especially manifest in the *Tetraonidæ*, in which certain misstatements required correction, and the general tenor of the description of cranial characters needed to be freed from some objectionable features, particularly the literal interpretation of cranial bones as parts of modified vertebræ. This article is furthermore in its present dress embellished with numerous wood-cuts loaned by Baird from his "History of North American Birds," and the *Speotyto* paper is similarly illustrated. In the Grouse family, again, a good deal of matter relating to external characters, and even habits and geographical distribution, is profitably introduced. The lithographic plates are, we think, the same as before; 14 of the 24 are devoted to the four memoirs here in mention, the *Tetraonidæ* claiming 9 of them.

The appearance of anatomical work on birds in this country is so rare an event, and the outlook for that branch of the science, hitherto so sadly neglected among us, is still so far from being all that could be wished for, that these memoirs would be welcome even were their importance and utility less than they really are. The text is a faithful and on the whole an accurate description of the objects under designation, and the fidelity with which the plates are executed is most commendable. If "faithful are the wounds of a friend," the author will not otherwise regard some strictures which we must pass upon the work as a whole, although we are well aware—no one is more thoroughly aware than ourselves!—of the obstacles in the way of good scientific work which the Army delights to furnish. The circumstances of preparation of most of these articles made "breadth" of treatment out of the question, fostered a tendency to dwell with prolixity upon non-essential minutie, and cramped the author in those comparisons and generalizations which alone put life in dry bones. For the rest, we must risk being thought finical or pedantic in finding fault with the literary infelicities which betray a less experienced pen than we have no doubt Dr. Shufeldt will duly come to wield. For instance, some one inclined to be cynical might call the following sentence, which concludes the *Tetraonidæ*, an example of "how not to do it."

"In short, although ornithologists will no doubt always retain these two forms [*Cupidonia* and *Pediæcetes*] in separate genera as the classification of birds goes, still it may be well to bear in mind that nearly or quite all of the anatomical characters of *Cupidonia* and *Pediæcetes* when compared together bring these two Grouse nearer to each other than any other two forms of the group in our fauna; so near, in fact, that but little violence would be perpetrated by restricting them both to one and the same genus, and no doubt there are not a few instances in our present classification of birds where forms not so nearly related as these two Grouse are that have been retained in one genus" (p. 700).

The osteology of the *Cathartidæ*, which occupies pp. 727-806, with plates xv-xxv, and is further embellished with original wood-cuts, as

well as others from the source above mentioned, is a superior piece of work, showing the author's progress under more favorable conditions of environment in Washington. The treatment is freer and clearer; description is not confined to the osteology, and comparisons are made outside the family—especially with the Vulturine *Falconidæ* of the Old World. Attention is particularly called to the claw of “index” digit in this family. The numerous genera now in vogue, based upon external characters alone, seem to be well supported by osteological features, when, as in the present case, the whole skeleton is passed in review. On the whole it is a careful piece of descriptive work, the value of which is increased by adequate comparisons with related forms; and which would have been still enhanced had the author concisely formulated the net results of his investigation—giving his work that finish which, for example, confers such clarity upon Garrod's polished productions.—E. C.

RIDGWAY ON NEW SPECIES AND SUBSPECIES OF BIRDS.—In numerous papers published in the “Proceedings” of the National Museum for 1881 and 1882 Mr. Ridgway has described a considerable number of new species and races of birds and several new genera, chiefly from North and Middle America. They also contain notes on a few other hitherto little known species. The first paper of the series here enumerated* contains descriptions of *Troglodytes* (?) *ochraceus* and *Acanthidops* (gen. nov.) *bairdi*, both from Volcan de Irazú, Costa Rica; in the second paper are described *Chasiempis sclateri* and *Cymochorea cryptoleucura*, both from the Sandwich Islands. In the third, *Asio portoricensis* is described from Porto Rico, with an analysis of the distinctive characters of this species and *A. accipitrinus* and *A. galapagoensis*, together with the synonymy of these forms. In the fourth paper two new subspecies of North American Thrushes are distinguished, namely, *Hylocichla fuscescens salicicola*, from Colorado and neighboring Territories, and *Hylocichla aliciae bicknelli*, from the Catskill Mountains of New York. In the fifth paper *Motacilla*

*1. Notes on some Costa Rican Birds. By Robert Ridgway. Proc. U. S. Nat. Mus., 1881, pp. 333-337. March, 1882.

2. Description of a new Flycatcher and a supposed new Petrel from the Sandwich Islands. By Robert Ridgway. *Ibid.*, 1881, pp. 337, 338. March 29, 1882.

3. Description of a new Owl from Porto Rico. By Robert Ridgway. *Ibid.*, 1881, pp. 366-371. April 6, 1882.

4. Description of two new Thrushes from the United States. By Robert Ridgway. *Ibid.*, 1881, pp. 374-379. April 6, 1882.

5. On two Recent Additions to the North American Bird Fauna, by L. Belding. By Robert Ridgway. *Ibid.*, 1881, pp. 414, 415. April 24, 1882.

6. Description of several new Races of American Birds. By Robert Ridgway. *Ibid.*, 1882, pp. 9-15. June 5, 1882.

7. On the genera Harporhynchus, Cabanis, and Methriopterus, Reichenbach, with a description of a new genus of Miminæ. By Robert Ridgway. *Ibid.*, 1882, pp. 43-46. June 5, 1882.

8. Description of some new North American Birds. By Robert Ridgway. *Ibid.*, 1882, pp. 343-346. Sept. 5, 1882.

ocularis Swinh. and *Dendræca vieilloti bryanti* are recorded from La Paz, Lower California, the former a straggler from Asia, the other previously known only from Southern Mexico and Central America. In the sixth paper are described six new races of American birds, as follows: *Methriopterus curvirostris occidentalis*, from the coast region of Western Mexico; *Mimus gilvus lawrencii*, from the Isthmus of Tehuantepec; *Merula flavirostris graysoni*, from the Tres Marias Islands; *Sialia sialis guatemalæ*, from the highlands of Guatemala; *Chamæa fasciata henshawii*, from the "interior districts of California, including west slope of Sierra Nevada; north to Sacramento, south to Walker's Basin, Tejon Mts., and San Diego"; and *Perisoreus canadensis nigricapillus*, from Labrador, considered as the Atlantic coast representative of the littoral race of Alaska, known as *P. canadensis fumifrons*. In the seventh paper Mr. Ridgway restricts the genus *Harporhynchus* to the *H. redivivus* group, and adopts *Methriopterus* Reich. for the *H. rufus* group. On *Harporhynchus graysoni* he founds his new genus *Mimodes*. In the eighth paper he distinguishes two new races and two new species of North American birds, as follows: *Catherpes mexicanus punctulatus*, from California (extending north to San Francisco and the Calaveras River); *Lophophanes inornatus griseus*, Middle Province of the United States; *Geothlypis beldingi*, from San Jose, Lower California; and *Rallus beldingi*, from Espiritu Santo Islands, Lower California. The latter is said to most resemble *R. elegans*.—J. A. A.

REICHENOW AND SHALOW'S COMPENDIUM OF NEWLY DESCRIBED GENERA AND SPECIES OF BIRDS.*—This convenient summary, sufficiently explained by its title, is still continued. As already noticed (this Bulletin, Vol. VI, p. 111), it gives transcripts of the original diagnoses, when such are given, and in other cases mentions the types of the genera and the alleged characteristics of the species.—J. A. A.

REICHENOW'S CONSPECTUS PSITTACORUM.†—The order *Psittaci* is divided into 9 families and 45 genera (including 27 subgenera); 444 species and subspecies are recognized. The higher groups are characterized, and Latin diagnoses are given of the species, together with their principal synonyms, and references to figures and the more important works relating to the species. English and French, as well as German, vernacular names are given. The monograph thus forms a convenient handbook of this interesting order. It originally appeared in parts in the "Journal für Ornithologie" for 1881.—J. A. A.

* Compendium der neu beschriebenen Gattungen und Arten. Von Anton Reichenow und Herman Shalow. Journ. für Ornith., XXIX Jahrg., 1881, pp. 70-102, 417-423; XXX Jahrg., 1882, pp. 111-120, 213-228.

† Conspectus Psittacorum. Systematische Uebersichte aller bekannten Papageienarten. Von Dr. Ant. Reichenow. 8vo, Berlin, 1882, pp. 234. (Sonderabdruck aus Journal für Ornithologie, XXIX Jahrg., 1881, pp. 1-49, 113-177, 225-289, 337-398.)

STEJNEGER ON TWO NEW RACES OF MYIADESTES OBSCURUS.*—The new races are *M. obscurus* var. *occidentalis*, from the highlands of Southern Mexico and Guatemala, and *M. obscurus* var. *insularis*, from the Tres Marias Islands.—J. A. A.

STEJNEGER'S SYNOPSIS OF THE WEST INDIAN SPECIES OF MYIADESTES.† —Eight species are recognized, two of which (*M. sanctaeluciae*, *M. dominicanus*) are described as new.—J. A. A.

NATIONAL MUSEUM DESIDERATA OF AMERICAN BIRDS.‡—Mr. Ridgway has published a list of Middle and South American birds not contained in the National Museum down to July, 1881, and also a list of special desiderata among North American birds§. These latter consist mainly of young, especially those in the first plumage. The species wholly unrepresented are very few, but quite a number are represented by only extra-limital specimens.—J. A. A.

DUBOIS ON GEOGRAPHICAL VARIATION IN THE CROSSBILLS.||—M. Dubois reviews the genus *Loxia* from the standpoint of geographical variation. In his introductory remarks he refers to his having previously called the attention of naturalists to the variability of certain birds, and to his having attempted to show that a large number of species are in reality simply climatic varieties. These varieties, races, or subspecies, he holds to be the result of the action of climate, food, or other "fortuitous causes" upon size and coloration, and states that his morphological studies have demonstrated that species are variable in proportion to the extent of their area of dispersion. Although claiming priority in the matter of reuniting *Loxia americana* to the European *L. crucirostra* (Conspectus syst. et geogr. Avium europ., 1871, p. 18), he hints at no general laws of geographical or climatic variation. In regard to the Crossbills, which he cites in illustration of his views, he refers the eight recognized forms of *Loxia* to three species, as follows: 1. *L. pityopsittacus*; 2. *L. crucirostra* (Linn., 1766), with varieties (a) *americana*, (b) *mexicana* (c) *himalayana*; 3. *L. leucoptera*, with varieties (a) *bifasciata*, (b) *amurensis*, the last here first distinguished.—J. A. A.

* Description of two new Races of Myadestes obscurus Lafr. By Leonhard Stejneger. Proc. U. S. Nat. Mus., 1881, pp. 371-374. Apr. 6, 1882.

† Synopsis of the West Indian Myiadeses. By Leonhard Stejneger. Proc. U. S. Nat. Mus., 1882, pp. 15-27, pl. ii. June 5, 1882.

‡ List of Species of Middle and South American Birds not contained in the United States National Museum. By Robert Ridgway. Proc. U. S. Nat. Mus., 1881, pp. 165-203. Aug. and Nov., 1881.

§ List of Special Desiderata among North American Birds. By Robert Ridgway. Proc. U. S. Nat. Mus., 1881, pp. 207-223. Nov., 1881.

|| De la Variabilité des Oiseaux du genre *Loxia*. Par M. Alph. Dubois, Conservateur au Musée royal d'histoire naturelle de Belgique. Extrait du Bulletin du Musée royal d'histoire naturelle de Belgique, Tome I. Oct. 1882.

BIRDS OF PENNSYLVANIA.—The "Quarterly Journal of the Boston Zoölogical Society," IV, Jan., 1883, contains (pp. 8-11) the conclusion of a "List of Birds observed near Bradford, Pa.," by James A. Tuelon. As the whole number is only 77, without exception very common and well-known species, and as the annotations are of no special consequence, the reason why the list is printed is not evident.—E. C.

MINOR ORNITHOLOGICAL PUBLICATIONS.—236. *Song Birds of Western New York*. By E. E. Fish. *Buffalo Courier* (newspaper), Feb. 12, 1882. —A pleasantly written, discriminating notice of about 30 species, occupying three columns of the newspaper. Read before the Buffalo Society of Natural History, Feb. 10, 1882.

237. *Die Einführung des Sperlings in den Vereinigten Staaten*. Von H. Nehrling. *Im familien Kreise* (Zeitung), Jahrg. 3, Nr. 14 und 15, pp. 271, 300. Milwaukee, Wisc., 3 und 17 Juli, 1880. —General review of the introduction, history, and habits of *Passer domesticus* in the United States.

238. *Die Vögel des South Park in Colorado*. Von Friedrich Trefz. *Monatsberichte des Deutschen Vereins zum Schutze der Vogelwelt*. VI Jahrg., Nr. 12, Dec. 1881, pp. 280-289, VII Jahrg., Nr. 2, Feb. 1882, pp. 39-44, Nr. 4, April, 1882, pp. 93-96, Nr. 7, Juli 1882, 183-190, Nr. 9, Sept. 1882, pp. 243-246 —A very fully annotated list of the species.

239. *Ornithologische Beobachtungen aus Texas*, III, IV, und V. Von H. Nehrling. *Monatsb. des Deut. Vereins zum Schutze der Vogelwelt*, VII Jahrg., Nr. 345, März, April u. May, 1882, pp. 72-78, 96-104, 127-134. —Running notes on various species. (For notice of parts I and II see this Bulletin, VII, pp. 109, 117.)

240. *Der Wald- oder Rothaugenvireo (Vireosylva olivacea, Bonap., Red-eyed Vireo)*. Von H. Nehrling. *Monatsb. des Deutschen Vereins zum Schutze der Vogelwelt*, VII Jahrg., Nr. 9, pp. 233-243, Sept. 1882. —Very full biography of the species.

The department of "Zoölogical Miscellany" (Dr. F. W. Langdon, editor) in the "Journal of the Cincinnati Soc. of Nat. Hist.," Vol. V, 1882, contains the following (Nos. 241-258):

241. *Dichromatism in the Screech Owl (Scops asio, Bp.)*. By the Editor. *Journ. Cincinnati Soc. Nat. Hist.*, pp. 52, 53. —Of 56 specimens 32 were red, and 24 gray.

242. *Albinism—Buteo borealis, Vieillot.—Red-tailed Buzzard*. By John W. Shorten. *Ibid.*, p. 53. —The "entire plumage white as snow."

243. [*Bird Visitors at Schoolroom Windows.*] By E. R. Quick. *Ibid.*, p. 54. —Three species of Woodpecker, a Nuthatch, and Tufted Titmouse; locality, Brookville, Ind.

244. *Winter Birds of 1880 and 1881 in the Whitewater [Ind.]*. By E. R. Quick. *Ibid.*, pp. 54-56. —Brief notes on 41 species.

245. *Mimus polyglottus, Boie.—Mocking Bird*. By the Editor. *Ibid.*, p. 56. —Specimen taken at Bardstown, Nelson Co., Kentucky, Jan. 25, 1882.

246. *Aluco flammeus americanus*, Ridgway.—*Earn Owl*. By John W. Shorten. *Ibid.*, p. 57.—Specimen taken at Hartwell, O., about 10 miles from Cincinnati. March 3, 1882.
247. [*List of Birds observed on a March from Ft. Leavenworth, Mo., to Santa Fe, N. M., in 1846 and 1847.*] By James W. Abert, Colonel U. S. A. *Ibid.*, pp. 57-59.—Brief notes on about 60 species, giving date and place (approximately) of observation.
248. *A Day in a Louisiana Swamp*. By the Editor. *Ibid.*, pp. 89-92.—Includes informal notes on a number of species of birds.
249. *Spring Arrivals at Bardstown, Ky.* By C. W. Beckham. *Ibid.*, p. 93.—Brief mention of 12 species.
250. *Brookville [Indiana] Notes*. By E. R. Quick. *Ibid.*, pp. 93-95.—On 8 species.
251. *Herodias alba egretta* . . . *American Egret*. By John W. Shorten. *Ibid.*, p. 95.—Specimen in full breeding plumage taken at Maysville, Ky., April 22, 1882.
252. *Spiza americana* . . . *Black-throated Bunting*. By the Editor. *Ibid.*, p. 95.—Description of an abnormal specimen.
253. *Buteo borealis* . . . *Red-tailed Hawk*. By J. W. Shorten. *Ibid.*, p. 95.—Note on contents of stomach of an example examined.
254. *Cupidonia cupido* . . . *Prairie Hen*. By the Editor. *Ibid.*, p. 95.—On two specimens kept in confinement.
255. *Rallus elegans* . . . *Great Red-breasted Rail*. By the Editor. *Ibid.*, p. 95.—Specimen taken having a large water beetle sticking in its oesophagus.
256. *A Synopsis of the Cincinnati Fauna*. By the Editor. *Ibid.*, pp. 185-191.—"Class Aves: Birds," p. 186 (264 species).
257. [*Notes on Ohio Birds.*] By Walter Douglas. *Ibid.*, p. 191.—Short notes on 9 species.
258. *Ornithological Notes from Brookville, Indiana*. By A. W. Butler. *Ibid.*, pp. 192, 193.—Short notes on 17 species.
259. *Nest of a Megapod*. By Prof. Henry A. Ward. *Ward's Nat. Sci. Bulletin*, Vol. I, No. 2, Jan. 1881, pp. 9, 10.—Detailed account, with cut of nest, of the breeding habits of *Megapodius tumulus*, from observations by the author.
260. *The Apteryx*. By F. A. L[ucas]. *Ibid.*, p. 11. General account of the *Apteryges* and their relationships.
261. *Hints about making Bird Skins*. By F. A. L[ucas]. *Ibid.*, p. 11.
262. *How to Soften Dry Bird Skins*. By W. T. H[ornaday]. *Ibid.*, p. 11.
263. *The Black Swan*. By "Cygnus," with an introductory paragraph by Prof. H. A. Ward. *Ibid.*, No. 3, April, 1882, p. 8.—On the habits of *Chenopsis atrata*.
264. *Osteological Abnormalities*. By Frederic A. Lucas. *Ibid.*, p. 12.—Devoted mainly to mammals, but notes a malformed skull each of the common Fowl and Robin, and lower mandible in a South American Bittern (*Tigrisoma*).

265. *The Moa at Home*. By E. E. H[owell]. *Ibid.*, II, No. 1, Jan. 1883, pp. 4, 5, 7, 8.—On the first discovery of bones of the Moa, when and how Moas became extinct, their classification, etc., with cuts of four Moa skeletons recently sent to the Cambridge Museum of Comparative Zoölogy, and of skin from neck and of a feather of a Moa.

266. *Taxidermy at Home*. By "One of the Taxidermists." *Ibid.*, pp. 13, 14.—Taxidermy and taxidermists at Ward's Natural Science Establishment, Rochester, N. Y., with cut of the taxidermists' workroom, and some sensible observations on the general subject of taxidermy.

266 bis. *The Century Article*. Editorial. *Ibid.*, p. 2.—Corrections of article on "The Taxidermal Art" in "Century" magazine for Dec. 1882. (See next title.)

267. *The Taxidermal Art*. By Franklin H. North. *Century Magazine*, XXV, Dec. 1882, pp. 230-239, 10 figg.—Contains references to the work of such noted taxidermists as Waterton, the Verreaux brothers, etc., the work carried on at Prof. Ward's establishment at Rochester, N. Y., with some account of the difficulties of the art and how they are overcome. Of the 10 illustrations 8 relate to birds, and represent pieces by F. S. Webster, W. T. Hornaday, J. W. Fraine, and W. E. D. Scott. (Mistakes in giving credit for some of the pieces figured are corrected in the following No. of the Magazine, XXV, p. 462.)

268. *With the Birds on Boston Common*. By Bradford Torrey. *Atlantic Monthly*, LI, Feb. 1883, pp. 203-208.—Contains notes on *Sphyrapicus varius* and *Lanius borealis*, and briefer notices of many other species.

The "Ornithologist and Oölogist,"* volume VI (March 1881-March 1882), contains, besides brief notes about common species, too numerous and not of sufficient importance for enumeration within our limited space, the following (Nos. 269-363):—

269. *The Oölogist. Its History from the Commencement*. By the Associate Editor [S. L. Willard]. *Ornithologist and Oölogist*, VI, pp. 1-3.

270. "That Woodcock" [*with the stick through its breast*]. By H. Merrill. *Ibid.*, VI, p. 3, cut.

271. *Sparrow Hawk*. By Jno. H. Sage. *Ibid.*, VI, p. 6.—Breeding at Portland, Conn., in a pigeon-hole in a barn! Also notice of capture of *Accipiter fuscus* in winter (Feb. 4, 1881).

* Ornithologist and Oölogist. Joseph M. Wade, Editor and Publisher. Norwich, Conn. Large 8vo. Vol. VI, March 1881-March 1882, pp. 1-96. For notice of earlier volumes of the "Oölogist" see this Bulletin, Vol. IV, 1881, p. 47, 48. The volume here summarized contains many papers of much interest respecting the breeding habits of species not previously well-known. Each number, however, usually contains a paragraph of "corrections" of misstatements in previous issues, in addition to corrections occasionally made by contributors, which seems to show a lack of care on the part of the editor in the discrimination of matter. Misprints and other typographical infelicities are by no means rare, yet we can but congratulate the editor on the steady improvement in these respects which mark the volume, and the increasing scientific value of its matter, contrasting as it does most favorably with that of the earlier volumes of the series.

272. *Night Herons in Winter*. By Henry Halès. *Ibid.*, VI, p. 6.—Habits of a tame individual kept by the writer at Ridgewood, N. J.

273. *California Bird Notes*. By B. W. Evermann. *Ibid.*, VI, p. 7.—On the habits of *Geococcyx californianus*, and notes on the early nesting of various other species.

274. *Hooded Warblers. Nesting in Southern Conn.* By J. N. Clark. *Ibid.*, VI, pp. 9, 10.—The taking of various nests recorded.

275. *Horned Lark. Nesting Habits in Orleans Co., N. Y.* By F. H. Lattin. *Ibid.*, VI, pp. 10, 11.

276. *Cactus Wren (Campylorhynchus brunneicapillus)*. By G. Holterhoff, Jr. *Ibid.*, VI, p. 11.—Account of its breeding habits, nest and eggs.

277. *Scarlet Tanager*. [By Dr. H. A. Atkins.] *Ibid.*, VI, p. 13.—Dates of arrival of *Pyrranga rubra* at Locke, Ingham Co., Mich., for 25 years.

278. *Baltimore Oriole*. By Dr. H. A. Atkins. *Ibid.*, VI, p. 13.—Dates of its arrival for 25 years at Locke, Ingham Co., Mich.

279. *Bird Notes*. By J. M. Howey. *Ibid.*, VI, p. 13.—Capture of a Hawk Owl (*Surnia ulula hudsonia*) at Gorham, N. Y., Nov. 1875, and on the breeding of the Killdeer Plover (*Ægialites vociferus*) and Indigo Bird (*Cyanospiza cyanea*) at Canandaigua, N. Y.

280. *Catching a Tartar*. By F. T. Jencks. *Ibid.*, VI, p. 14.—A Little Black-head Duck (*Fulix affinis*) caught by the tongue by a mussel.

281. *Marsh Hawk (Circus hudsonius). A Large set of Eggs*. By S. F. Rathbun. *Ibid.*, VI, p. 14.—A clutch of 7 found at Dunnville, Ont.

282. *Henslow's Sparrow. Nesting in Northern Conn.* By C. M. Jones. *Ibid.*, VI, pp. 17, 18.—*Coturniculus henslowi* met with several different years, and two nests found, at Eastford, Conn.

283. *Collecting on the Pacific Coast*. By C. A. Allen. *Ibid.*, VI, pp. 18, 19.—Notes on various species of Cormorants, Puffins, Gulls, etc., found breeding at Punta de los Reyes, Cal.

284. *Least Titmouse. Its Nesting Habits in California*. By B. W. Evermann. *Ibid.*, VI, p. 19.

285. *Northwestern Screech Owl*. By Chas. Bendire. *Ibid.*, VI, pp. 21, 45.—On the nesting habits and eggs of "*Scops asio kennicotti*."

286. *Bird Notes from Virginia*. By W. T. Allen. *Ibid.*, pp. 20, 21.—On the nesting of several species, and the capture of a Cooper's Hawk with a "large splinter . . . through the fleshy part of the wing near the shoulder."

287. "*Catching a Tartar*." By Frank S. Wright. *Ibid.*, p. 22.—A Florida Gallinule caught by the lower mandible by a mussel.

288. *Oölogical Notes from St. John [N. B.]*. By M. Chamberlain. *Ibid.*, VI, pp. 23, 24.—On the nesting of the White-winged Crossbill, Solitary Sandpiper, Winter Wren, etc.

289. *Yellow-bellied Woodpecker (Sphyrapicus varius)*. By S. F. Rathbun [= Rathbun]. *Ibid.*, VI, pp. 25, 26.—On its breeding in small numbers near Auburn, N. Y.

290. *Bubo Virginianus. Its Nesting Habits, etc.* By C. A. Hawes. *Ibid.*, VI, pp. 26, 27.

291. *Verdin or Yellow-headed Titmouse (Paroides flaviceps (Baird)).* By G. Holterhoff, Jr. *Ibid.*, VI, p. 27.—Its breeding habits.

292. *Ruby Throated Hummingbird.* — (*Trochilus colubris Linnæus.*) By A. H. Mundt. *Ibid.*, VI, p. 29.—Its habits in confinement.

293. *Great Auk.* By J. T. T. Reed. *Ibid.*, VI, p. 29.—Notice of the sale at auction in London of two "rather damaged" eggs of this species for respectively £100 and £102.

294. *Small Green-crested Flycatcher.* By Dr. H. A. Atkins. *Ibid.*, VI, p. 29.—Dates of the arrival of *Empidonax acadicus* for 25 years at Locke, Ingham Co., Mich.

295. [*Winter*] *Notes from Norwich, Conn.* By S. T. Holbrook. *Ibid.*, VI, pp. 30-32.

296. *California Pigmy Owl (Glaucidium gnoma). Life Size.* By Wm. Wood, M.D. *Ibid.*, VI, pp. 33-35, 47-48.—A general history of the species, with cut of the bird (p. 33).

297. *The Screech Owl in Confinement.* By Edgar A. Small. *Ibid.*, VI, p. 35.

298. *A Tame Wild Blue Jay (Cyanura cristata).* Editorial. *Ibid.*, VI, p. 36.—Nesting of the species in dooryards, and of one sitting bird so tame as to permit herself to be repeatedly removed from her nest by the hand.

299. *The Season of '81.* By J. M. W[hipple]. *Ibid.*, VI, pp. 37, 38.—About the nesting of Hawks and Owls near Norwich, Conn.

300. *Growth of Robins.* By Dr. S. W. Hart. *Ibid.*, VI, pp. 38, 56.

301. *General Notes.* *Ibid.*, VI, p. 39, 43.—On several species by various contributors.

302. *Notes from Saratoga, N. Y.* By Guy C. Rich. *Ibid.*, VI, p. 39.—On the arrival and date of nesting of various species, with an *erroneous* record of the capture of "a Cormorant (*G. Carbo*)" at Saratoga Lake. (On this record see below, No. 363.)

303. *Notes from Shelter Island [N. Y.]* By W. W. Worthington. *Ibid.*, VI, pp. 40, 46.—Dates of arrival and nesting of various species, etc.

304. *Large Clutches of Eggs.* Editorial. *Ibid.*, VI, p. 40.—Burrowing Owls with sets of 11 eggs each; Barn Owl with 10, etc. See also *Ibid.*, p. 53.

305. *Burrowing Owl. Speotyto cunicularia hypogæa. (Ridgw.).* By Cap. Chas. Bendire, U. S. A. *Ibid.*, VI, pp. 41-43, 61.—General history of the species.

306. *William MacGillivray.* Editorial. *Ibid.*, VI, p. 43.—List of his principal writings.

307. *Rare Finds.* Editorial. *Ibid.*, VI, p. 44.—Chiefly an extract from a letter from Dr. James C. Merrill, about rare nests described by him later in this Bulletin (Vol. VI, pp. 203-207). Also see "Corrections," p. 53.

308. *Whip-poor-will.* By Dr. H. A. Atkins. *Ibid.*, VI, p. 45.—Dates of arrival of *Antrostomus vociferus* at Locke, Mich., for 26 years.

309. *Notes from Denver, Colorado.* By D. D. Stone. *Ibid.*, VI, pp. 45, 46, 67.—Reference to nesting of several species, including "*Zamelodia ludoviciana*," for which read *Z. melanocephala* (p. 45).

310. *Kentucky Warbler* [*Oporornis formosa*]. *Its Nesting Habits.* By F. T. Jencks. *Ibid.*, VI, p. 49.

311. *Black Throated Blue Warbler* [*Dendroica caerulescens*]. *Nesting in Connecticut.* By C. M. Jones. *Ibid.*, VI, pp. 49, 50.

312. *Yellow-bellied Woodpecker Nesting at Auburn, N. Y.* By T. J. Wilson, M. D. *Ibid.*, VI, p. 50.

313. *Notes from Moosehead Lake, Me.* By J. H. Sage. *Ibid.*, V, pp. 50, 51.—Notes on the nesting of a number of the rarer species.

314. *Notes from Bangor, Me.* By Newell A. Eddy. *Ibid.*, VI, p. 51.—Notice of a number of "good 'finds.'"

315. *Pine Groesbeaks* [sic]. By H. Gray. *Ibid.*, VI, p. 51.—Several flocks of "*Pinicola enucleator*" seen in summer at Albion, N. Y. *N. B.*—At p. 61 this note is stated to relate to the "Pine Goldfinch, *Chrysomitris pinus*."

316. *Little Blue Heron.* By John N. Clark. *Ibid.*, VI, p. 51.—Half a dozen in immature plumage taken at Saybrook, Conn., Aug. 12, 1881.

317. *Remarkable Flight of Birds.* By M. Chamberlain. *Ibid.*, VI, p. 53.—Scarlet Tanagers, Indigo Birds, and Green Herons, at Westport, Nova Scotia, "driven in by a gale."

318. *Close of the Season.* By J. M. W[hipple]. *Ibid.*, VI, pp. 54, 55.—Desultory notes on various Connecticut birds.

319. *Those "Brants."*—*Corrections.* By W. H. Collins. *Ibid.*, VI, p. 55.—The supposed Brant's eggs previously described in *Oölogist* as found at St. Clair Flats, Mich., proved to be eggs of the Ruddy Duck.

320. *Notes from Maine.* By M. H. *Ibid.*, VI, p. 56.—On decrease of certain birds formerly common about Camden, Me., etc.

321. *Blue-winged Yellow Warbler* [*Helminthophila pinus*]. *Its Nesting Habits, etc.* By Fred. T. Jencks. *Ibid.*, VI, p. 57.

322. *Golden-crowned Kinglet* [*Regulus satrapa*]. *Its Nest and Eggs.* By Harry Merrill. *Ibid.*, VI, p. 58.—On the identification of a nest and eggs described by the late Dr. Brewer in this Bulletin for April, 1879 (Vol. IV, p. 96).

323. *Snow Bird* [*Junco hiemalis*] *nesting in New York State.* By J. A. Dakin. *Ibid.*, VI, p. 59.

324. *Blue Yellow-backed Warbler* [*Parula americana*] *Nesting on Shelter Island [N. Y.]* By W. W. Worthington. *Ibid.*, VI, p. 62.

325. *Black-capped Yellow Warbler* [*Myiodiodes pusillus*]. *Its Nesting Habits.* By W. Otto Emerson. *Ibid.*, VI, pp. 62, 63.

326. *Pintail Duck* [*Dafila acuta*]. *Its Nest and Eggs.* By D. H. Eaton. *Ibid.*, VI, p. 63.

327. *Kingbird and Kingfisher.* By Fred T. Jencks. *Ibid.*, VI, p. 64.—The latter attacked by the former.

328. *Kentucky Warbler.* By Edgar A. Small. *Ibid.*, VI, p. 64.—Short note on its nest and eggs.

329. *Sparrow-Hawk and Plover*. By Charles A. Willis. *Ibid.*, VI, p. 64.—Diving of the latter to escape attack.

320. *Rare Birds*. Editorial. *Ibid.*, VI, p. 64.—A Yellow Rail taken at Topsfield, Mass., and a Curlew Sandpiper at Pine Point, Me.

331. *Prothonotary Warbler*. *Protonotaria citrea*. By Fred T. Jencks. *Ibid.*, VI, p. 66.

332. *Notes from Maryland*. By Edgar A. Small. *Ibid.*, VI, p. 66.—On 7 species; includes Snowy Owl, Raven, Pileated Woodpecker, etc.

333. *Small-billed Water Thrush*. By M. K. Barnum. *Ibid.*, VI, p. 66.—Nesting in Onondaga Co., N. Y.

334. *Yellow-headed Blackbird*. By Geo. L. Tappan. *Ibid.*, VI, p. 67.—Description of a "peculiar specimen."

335. *Rose-breasted Grosbeak*. Editorial. *Ibid.*, VI, pp. 68, 69, 84.—Account of a caged specimen.

336. *Osprey Eagle—Inland*. Editorial. *Ibid.*, VI, p. 69.

337. *Notes from Maine*. By Harry Merrill. *Ibid.*, VI, p. 71.—Commentary on article of same title by "M. H." (See above, No. 320.)

338. *Hooded Warbler*. [By Fred. T. Jencks.] *Ibid.*, VI, p. 72.

339. *Red-headed Woodpeckers in Southern Conn.* By J. M. Clark. *Ibid.*, VI, p. 72.

340. *Cooper's Hawk*. By J. M. W[hipple]. *Ibid.*, pp. 73, 74.

341. *California Quail breeding in the Garden*. By C. M. Crowell. *Ibid.*, VI, pp. 74, 75.

342. *American Bittern*. By Guy C. Rich. *Ibid.*, VI, p. 77.—As observed at Saratoga, N. Y.

343. *Worm-eating Warbler* [*Helminthotherus vermivorus*]. By Fred. T. Jencks. *Ibid.*, VI, p. 78.

344. *Native Birds in Confinement*. By Annie Trumbull Slosson. *Ibid.*, VI, p. 78. — *Junco hiemalis*, *Plectrophanes nivalis*, *Ægiothus linaria*.

345. *Red-headed Woodpeckers* [*in Connecticut*]. By Wm. Wood. *Ibid.*, VI, pp. 78, 79.

346. *Notes from Maryland*. By Edgar A. Small. *Ibid.*, VI, p. 79.—Nesting of White-bellied Nuthatch reported, with notes on the breeding of other species.

347. *Red-headed Woodpeckers* [*at Hartford, Conn.*]. By Harry T. Gates. *Ibid.*, VI, p. 80.

348. *American Long-eared Owl* [*Asio americanus*]. By Capt. Chas. E. [sic] Bendire. *Ibid.*, VI, pp. 81, 82.—On its nesting habits in Idaho and Oregon Territories.

349. *Yellow or Red-shafted Flicker, which?* Editorial. *Ibid.*, VI, p. 82.—One side of the bird presented the characters of the Yellow-shafted Flicker, and the other side those of the Red-shafted.

350. *Notes from Shelter Island* [*N. Y.*] By Moses B. Griffing. *Ibid.*, VI, p. 82.—Ten White-bellied Swallows seen Oct. 25 and one Nov. 23, 1881, etc.

351. *Fork-tailed Flycatcher*. By H. Nehrling. *Ibid.*, VI, p. 83, with

cut.—Erroneously mentioned as "*Milvulus Tyrannis*," and the cut is of that species. See below, Nos. 359, 360, for correction.

352. *Road-runner* [*Geococcyx californianus*]. By B. W. Everman. *Ibid.*, VI, p. 85.—On its breeding habits.

353. *Chaparral Cock* [*Geococcyx californianus*]. By George B. Sennett. *Ibid.*, VI, p. 86.—Chiefly respecting the color of its eggs.

354. *House Sparrow in Maine*. By H. Merrill. *Ibid.*, VI, p. 86.

355. *Mexican Goshawk* [*Asturina nitida plagiata*]. By Capt. Chas. E. [sic] Bendire, U. S. A. *Ibid.*, VI, pp. 87, 88.—General account of the species, with details of its nesting habits.

356. *Our Two Cuckoos breeding in One Nest*. By Dr. H. A. Atkins. *Ibid.*, VI, p. 88.

357. *Sharp Shinned Hawk* [*Accipiter fuscus*]. By J. M. W[hipple]. *Ibid.*, VI, pp. 89-91.—On its nesting habits.

358. *Notes from Saratoga, [N. Y.]*. By Guy C. Rich. *Ibid.*, VI, p. 91.—Brief interesting notes on the breeding of various species.

359. "*Fork-tailed Flycatcher*." Editorial. *Ibid.*, VI, p. 92.—Explaining how in Dr. Nehrling's article on this species (see above, No. 351) it came to be spoken of as *Milvulus tyrannus* instead of *M. forficatus*, the name used in the author's manuscript.

360. "*Fork-tailed Flycatcher*," *Correction*. *Ibid.*, VI, pp. 93, 94.—This heading covers letters from H. Nehrling, Geo. B. Sennett, R. Ridgway, and William Brewster, in reference to H. Nehrling's paper bearing this title in the preceding number of the *O. and O.* (See above, No. 351.)

361. *Golden Eagles*. By S. A. Munson. *Ibid.*, VI, p. 94.—On its capture at Meadville, Pa., Dec. 10, 1881 (see this Bulletin, VII, p. 58) and also near Hartford, Conn.

362. *Whitney Owl* [*Micrathene whitneyi*]. By Capt. Chas. E. [sic] Bendire, U. S. A. *Ibid.*, VI, pp. 94-96.—Recounting the author's observations on the habits of the species, etc.

363. *Another Gannet* (*Sula bassana*) *from the interior of New York State*. By C. Hart Merriam, M. D. *Ibid.*, VI, p. 96.—The "*Cormorant* (*Graculus carbo*)" mentioned at p. 39, Vol. VI, of the *O. and O.* (see above, No. 302) as shot at Saratoga Lake announced to be really *Sula bassana*!

364. *Nest of Chatura pelagica*. By Thomas Mehan. *Proc. Acad. Nat. Sci. Philadelphia*, 1882, pp. 215, 216.—J. A. A.

General Notes.

CAPTURE OF THE BLUE-GRAY GNATCATCHER (*Poliophtila cærulea*) IN CONNECTICUT.—A male of this species was killed here May 11, 1883, by a boy with a sling shot, and is now in the cabinet of Mr. Jos. W. Lord. The only previous record for Connecticut that I find is the one given by Linsley (1843), and since quoted by Allen, Merriam, and other writers.—JNO. H. SAGE, *Portland, Conn.*

PARKMAN'S WREN IN ILLINOIS.—On May 7, 1883, while out collecting specimens I discovered a Parkman's Wren (*Troglodytes ædon parkmani*) on the side of a narrow wood surrounded by a marsh. On looking over the "Catalogue of Birds of Illinois," by Robert Ridgway, I noticed my friend Mr. Cole was the first to discover the Parkman's Wren in this State. I immediately called his attention to mine, and on comparing them we found them identical. In the catalogue referred to, under the title of Parkman's Wren, it says: "Several specimens in the collection of H. K. Coale from Hyde Park." This is a mistake, as he has only one specimen, mine therefore being the second. Author's collection, No. 331. Locality, Wood Lawn, Ill.—JOSEPH L. HANCOCK, *Chicago, Ill.*

BREEDING OF THE SHORT-BILLED MARSH WREN (*Cistothorus stellaris*) IN THE HUDSON HIGHLANDS.—In June, 1882, I found a nest in some "cat-tails" and rank grass in the marsh at the mouth of Moodna Creek, at Cornwall on the Hudson. The nest contained three white eggs, one of which is in my collection. This bird, of somewhat local distribution, has not hitherto been reported from the Highlands of the Hudson River.—ETTINGE ROE, *Cornwall-on-the-Hudson, N. Y.*

EARLY CAPTURE OF THE ORANGE-CROWNED WARBLER.—As perhaps worthy of mention in the Bulletin I may state that I shot a male *Helminthophila celata* on March 22, 1883, at Haddonfield, N. J., as it was feeding busily in the maples. Although the bird is rare, the date of capture is even more noteworthy than the simple fact of its occurrence.—SAMUEL N. RHOADES, *Haddonfield, N. J.*

OCCURRENCE OF SIURUS-NÆVIUS IN GREENLAND.—A specimen of the Small-billed Water Thrush was killed at Nanortalik, Greenland, in May, 1882, and was taken to Copenhagen by Erasmus Müller, one of the Government of Denmark employées in Greenland. It is now in the Royal Zoölogical Museum of that city. This I believe to be the first known occurrence of this species in Greenland.—J. J. DALGLEISH, *Edinburgh, Scotland.*

CAPTURE OF THE YELLOW-BREASTED CHAT AT ALBANY, N. Y.—In the latter part of May, 1882, I observed two birds of the appearance of the Yellow-breasted Chat (*Icteria virens*) in a sunny thicket between two small pieces of woods. But as they were silent and very shy, I was not positive of their identity. On the 19th of May of the present year, while collecting in the same thicket, I heard the unmistakable notes of a Chat. Its cries were very frequently uttered, but so shy was the bird, that, although searching for him nearly every day afterwards, it was not until the 26th of the same month that I secured him.

On the 19th of May I also secured three Northern Phalaropes (*Lobipes hyperboreus*, Cuv.) at a small lake near Albany.—G. A. LINTNER, Albany, N. Y.

NESTING OF CHRYSOMITRIS PINUS AT SING SING, N. Y.—The first of last of October, Pine Finches were first seen by us, in this locality, individuals and small flocks flying over uttering their characteristic and not unpleasant note. By the middle of the month they became common, frequenting the stubble and potato fields, feeding on the seeds of the ragweed (*Ambrosia artemisiæfolia*). Immense flocks, containing hundreds, were often seen. After the middle of December most of these flocks disappeared, a few individuals mixing in with the Redpolls and Goldfinches. About April 20 they began to reappear, and on May 8 I heard a song new to me; following in the direction, I found it to be that of the Pine Finch. The following week the birds were often seen, and their song frequently heard.

May 16 I saw one busily feeding on the buds of the Norway spruce. Now and then he would stop feeding, hop to the end of a twig, shake out his feathers, raise his crest, and then burst forth in song. While watching him and thinking of the probability of a nest near, he flew a short distance and alighted on the top of a red cedar (*Juniperus virginiana*), where he was immediately joined by his mate; her bill containing a quantity of soft, down-like material. After a moment's hesitancy, she settled down into a half completed nest. After depositing the materials for the nest, the female would fly away for more, the male would follow her as far as the Norway spruce above mentioned, where he would await her return; and as soon as she reappeared he would accompany her to the nest, and alight on the top of the tree, but in no way assisting in gathering material or in the construction of the nest. On May 25 I secured the nest. It was situated about two feet from the top of the tree, and about twenty-four from the ground. It contained four nearly fresh eggs. The nest proper, or outside part, is a frail affair, the lining making up the bulk of the nest. The outer part is made of fine twigs from the Norway spruce, loosely placed together, a few rootlets and pieces of string being interwoven. The lining is very compact, made up of hemp-like material, horse hairs, bits of thread, feathers, rootlets, and like substances. The nest measures eight centimeters in breadth by five centimeters in depth; the cavity five centimeters by three centimeters in depth. The ground

work of the eggs is of a light blue green, the spots, which are numerous and somewhat confluent on the larger end, are of a light brown lilac color. A few large and solitary spots of dark brown are dispersed sparingly over the greater part of the egg, diminishing in size towards the smaller end. One egg was unfortunately broken; the others measure as follows: $12\frac{1}{2} \times 16$ millimeters, $12\frac{1}{2} \times 16\frac{1}{2}$ mm., 12×17 mm.—A. K. FISHER, M.D., *Sing Sing, N. Y.*

SUSCEPTIBILITY OF A BIRD TO COLOR.—A curious case of this affection is reported to me by Mr. George F. Crook, of Cambridge, Mass. "I have a caged Red Linnet (*Carpodacus purpureus*), now about two years old—a cheerful fellow, unless anything *blue* should be presented to him or placed near him. Should either my wife or daughter—with whom he is on the best of terms—come near him with a blue dress, ribbon, or handkerchief, he becomes terribly excited and utters painful cries. No other color affects him in this way. About a year ago he escaped from his cage and was away nine days; his cage hung outside, and he returned to it in a very dilapidated condition. Had he been frightened by some Blue Jay? If not, what can be the cause of his 'blue-craze'?"

While we cannot explain the facts, we have no doubt the cause is farther to seek than any such accident. The effect of colors upon animals—as red upon a bull or turkey-cock—is a perfectly well-known fact, though one not satisfactorily accounted for.

This recalls a very curious case once brought to my professional notice, of a little child with some obscure nervous affection of the eyes, which rendered him painfully sensitive to light. This child delighted in anything blue, and the mental impressibility was so great that it was *transferred from color to sound*. There is a very strange connection, as musicians well know, between the two kinds of impressions derived from light-vibrations and sound-waves. The mother of the child could always soothe and please it by singing or playing "blue music," as it is called; while a few notes of "red music" sufficed to make the child cry out as if in great distress, and if continued, almost threw it into convulsions.

As if the bird's case were not already sufficiently curious and obscure, Mr. Crook later informed me that when his *blue-crazed* Red Linnet moulted, as it did last fall, not a single *red* feather showed itself; the former red feathers all came out *yellow*, as is so frequently the case with these red birds when moulting in confinement. If *Carpodacus* could only tell us, now, all he knows about the three primary colors, and express it in the music of his song!—ELLIOTT COUES, *Washington, D. C.*

THE LARK FINCH AGAIN IN MASSACHUSETTS.—On the 6th of April last, while "hunting without a gun," I saw for a moment a bird which I was confident was *Chondestes grammacus*. I visited the locality repeatedly after that, but without result until the evening of April 29, when I heard

the hardly-to-be-mistaken song of this bird. Next morning I was on the ground early, heard the song again, and finally obtained a sight of the singer so closely as to render the identification complete; but unfortunately failed to secure him. During the following week I looked for him every morning and evening, but he was no more to be heard or seen.

The record of this bird for Massachusetts (for all New England as well), as given in the latest work (Coues's Stearns of 1881), embraces three examples, no one of which was taken in the spring, unless possibly the first, in 1845, when the month is not given.

I send this note with hesitation, mindful of the ancient comparison of values of "a bird in hand," etc. (a low estimate from an Ornithological point of view!), but as I saw distinctly the white outer tail-feathers so characteristic of *Chondestes*, and heard the remarkable Canary-like notes several times, I consider the identification positive.—F. C. BROWNE, *Framingham, Mass.*

THE MEADOW LARK (*Sturnella magna*) IN VERMONT IN WINTER.—This species generally leaves for the south by the middle of October and I have never, till now, noted them later than this. On December 9, 1882, I shot a male in this vicinity, the ground at the time being covered with three inches of snow. On dissection the crop was found to be filled with an unrecognizable mass of insects, probably beetles.—F. H. KNOWLTON, *Middlebury, Vt.*

GEOCOCYX AS A VOCALIST.—Whilst out on a ramble a few weeks since in the foot-hills near San Diego, I chanced to make the (to me) interesting discovery of the possession of considerable vocal powers by the Road-runners. I had stopped for a few moments' rest and shelter from a noon-day sun, beneath the scant shade of an elder tree, and as I lay enjoying my "siesta" I heard from a hill-side in front of me what I at first thought to be the cooing of a Dove. I probably would have paid no particular attention had it not been that a friend with me, inquiring what it was that made the cry, I undertook to show him the supposed Dove. Again, and a third time, the cry was repeated before I could discover the originator, and when I did I could not at first credit my eyes when my ears had been so at fault. Not a tree or bush of decent size could be seen as a shelter for my Dove, and I marvelled that it should "coo" so contentedly from such a lonely site, and this it was that stimulated search—ocular search—for the author of the now mysterious cry.

The hill-side being only scantily covered by a scattering growth of cactus and low bushes, permitted a thorough looking over, and yet it was some minutes before I saw its only occupant and the vocalist whose somewhat ventriloquial notes had puzzled me, a male *Geococcyx californianus*.

Standing near the summit of the hillock, amidst his favorite cactus, and with outstretched neck and head bent down, he would utter, as if by prodigious effort, the lugubrious notes I had wrongly thought the cooing of the Dove. At each iteration of the cry he seemed to make a renewed

effort as if to rid himself of the troublesome "whooo," and when finished would stand motionless, perhaps marvelling at the sweetness of his own voice, or more likely awaiting a response. Thinking that this extraordinary exhibition might be for the benefit of his mate, I started up, after listening to several more "encores," and proceeded to investigate the hill-side. I found no bird but the one there, and my approach sent him scurrying across the valley.

These peculiar notes of the Road-runner sound, as near as I can word it, much like the prolonged syllable *whooo*—aspirating strongly the *wh* and giving the vowel as a soft guttural. This note,—not so prolonged as the "coo" of the Dove,—is repeated some five or six times in distinctly separate utterances, and is given with an effort which I can only liken to that exerted by our 'dung-hill champion when he calls to early matins. Now that I know these facts, I can remember numerous occasions when I heard the same sound, and wondered at not being able to see a Dove, which I naturally assumed to be the author of it. While I feel confident that even a careful ear might not detect the difference in the two sounds—not knowing the facts—yet once known there is little danger of mistaking them if heard near by. The softer Dove's "coo" is also not generally repeated as many times.

It may be that this observation brings nothing new to those well posted, but as it is new to me, and as I learn from residents here that it is a new fact to them, I will make it known, trusting that it may be news to many others. This I would not do whilst so much in the dark as to previous history, but that I am unable to "search the records" in this remote locality, and can only go by my own recollections.

One thing more, lest I mislead, and that is to say that besides this peculiar succession of notes, the Road-runner has a harsh, disagreeable "squawk," which, while not uttered often, is by no means a rare accomplishment or one not apt to be noticed by those who are familiar with the bird in its haunts.—G. HOLTERHOFF, JR., *National City, Cal.*

A PARTIAL ALBINO SHORT-EARED OWL (*Asio accipitrinus*).—I have a female of this species taken here April 29, 1883, in which the entire plumage is suffused with white, the ruff, upper part of neck, the median and lesser coverts, ends of primaries, secondaries, and tail being strongly so.—JNO. H. SAGE, *Portland, Conn.*

GREAT GRAY OWL IN RHODE ISLAND.—A very fine specimen of this species (*Syrnium cinereum*) was killed at Wickford, R. I., March 25, 1883. Mr. Gray, in our employ, heard of it and succeeded in purchasing it. We had a Horned Owl to mount the same day, and also a Barred Owl. The body of the Great Gray Owl was less than half the size of the Horned Owl's, and but little larger than that of the Barred Owl, though the bird itself exceeds the Great Horned in size. The eye is very small, and the breast feathers extremely long. Taken all in all, it is the most bird for the least substance we ever examined.—FRED. T. JENCKS, *Providence, R. I.*

OCCURRENCE OF A THIRD MASSACHUSETTS SPECIMEN OF THE LABRADOR GYRFALCON (*Falco gyrfalco obsoletus*).—A Gyrfalcon which I refer to variety *obsoletus* has just come into my possession through the kind offices of Mr. Charles I. Goodale, the well-known Boston taxidermist. It was shot in Stowe, Mass., in 1881, and mounted by S. Jillson of Hudson. It is a male in a plumage agreeing closely with that described by Mr. Ridgway* as the fully adult condition of the male of *obsoletus*. This specimen appears to be only the third which is known to have occurred in Massachusetts.—WILLIAM BREWSTER, *Cambridge, Mass.*

INSTANCE OF SEMIDOMESTICATION OF CALIFORNIA QUAIL.—While visiting the Tule River Agency in Tulare County, California, the agent, Mr. C. G. Belknap, learning of my interest in birds, related to me the history of a brood of California Quail (*Lophortyx californica*), which inhabited the near vicinity of the agency buildings. Besides being interesting, the facts narrated appear to me to contain a suggestion that may prove of value to all who are concerned in the domestication of Quail or other game birds. Briefly told the story is as follows.

One of the agent's hens, whose propensity for sitting had been repeatedly checked with a stern hand, suddenly disappeared. After a considerable interval the enterprising madam returned leading in her train—not a brood of chickens but a bevy of downy Quail, consisting of no fewer than fifteen chicks!

It is not difficult to surmise how she obtained possession of her treasures. The California Quail is extremely abundant in this locality, and while wandering about under the pangs of disappointed hopes the forlorn fowl doubtless alighted on a Quail's nest, ensconced in some secluded and inviting nook, with the owners absent. The temptation proved too strong to be resisted. Returning home the mother Quail, backed by her liege lord, doubtless made a stout fight for her own, but found herself utterly unable to cope with her formidable rival and drive her from her newly acquired possessory rights; no doubt *Lophortyx* soon gave up the unequal contest and retired to provide for a new brood in pastures new.

Very likely the misguided fowl supplemented the domestic treasures acquired in this original manner with an egg or two of her own, laid by the side of the stolen property as a sort of concession to outraged maternal instincts. These were forsaken, of course, on the appearance of her adopted nestlings.

Curiously enough the instincts of the wild birds, though but callow, proved stronger than the inherited tendencies of the domestic fowl, and as the brood increased in size and strength their foster-mother grew more and more wild. When the wings of the fledgelings became strong enough to bear them and they were flushed from the ground, the hen made frantic efforts to follow them on the wing. Evidently she became not a little unbalanced under the strain of caring for her strangely acting progeny. Up to the time the nestlings were fairly able to shift for themselves the

*.This Bulletin, Vol. V, pp. 92-95.

mother hen showed a disposition to shun the house and the associations of the barn-yard, and in their company to lead a wild and roving life. In due course of time the maternal solicitude weakened, and finally she reassumed her wonted place in the hennery. Strangely enough the Quail now in turn showed the effect of the temporary association, and, unwilling to entirely dispense with the motherly care, followed her to the hennery into which they frequently penetrated and fed. They never roosted there but retired at night to the branches of the nearest trees.

As the fall approached the brood was scattered—perhaps some were killed by Hawks—but at the time of my visit, the following spring, a portion of the number still frequented the neighborhood, and could be distinguished from other Quail by their tameness.

I believe that nearly all the experiments that have been tried in domesticating game birds have been made with old birds which have been allowed to rear their own young. Yet the above facts would seem to indicate that by allowing a domestic fowl to hatch the eggs and assume sole charge of the young, considerable impression may be made on their wildness, even when, as in the case narrated, the birds were left entirely free to follow the dictates of their own wills and instincts. Had the brood in question been deprived of the powers of flight at an early age, and their ability to range about been thus circumscribed in part or wholly, a very much greater effect on their wild spirits would have followed. Whether by the adoption of these or any other measures the California *Lophortyx* or any other of our Quails and Grouse can be fully domesticated is a matter which perhaps admits of much doubt, but which can only be satisfactorily demonstrated by actual experiments more carefully and systematically made than those hitherto attempted.—H. W. HENSHAW, *Washington, D. C.*

THE WOOD IBIS IN MASSACHUSETTS.—Mr. E. C. Greenwood, of Ipswich, writes me that a Wood Ibis (*Tantalus loculator*) was taken "June 19, 1880, at Georgetown, Mass., by the late Frank Hale, which was given to me." This is the first record of the species not only for Massachusetts, but for New England. It has, however, been taken at Troy, N. Y., and Williamsport, Penn. (see this Bulletin, Vol. I, p. 96), as well as at equally northern localities further west.—J. A. ALLEN, *Cambridge, Mass.*

THE SCARLET IBIS IN FLORIDA.—During a recent visit to Charleston, South Carolina, I found a Scarlet Ibis in the Museum of the College of Charleston, which is apparently a veritable United States example. The label bears the simple inscription "Scarlet Ibis, *Ibis rubra*, Florida," in the handwriting (so I was told by Dr. Manigault, the present curator) of Dr. Holmes, the late curator of the collection. Behind this memorandum it is impossible to go, there being no catalogue or other record of the collection of birds. The specimen itself (an adult, mounted) is evidently very old, being faded, dust-stained, and badly moth-eaten. As it must have been placed in the collection well back in the period of Dr.

Bachman's activity, it is strange that so important an acquisition was not announced either by him or his intimate friend Audubon. Still there would seem to be no present reason for doubting that the bird really came from Florida, to which it is now positively accredited for the first time. The only previous records for the United States at large are Audubon's well-known one of a flock seen in Louisiana and Dr. Coues's mention (Key, p. 264) of some fragments of a specimen from the Rio Grande.—WILLIAM BREWSTER, *Cambridge, Mass.*

RAILS AND SNIPE IN OHIO IN WINTER.—Page 124 of the April number of the Bulletin contains a note by Dr. Elliott Coues on the wintering of the Sora Rail at the North. The following from my field notes may be of interest in this connection: "Nov. 23, 1880.—Shot two Virginia Rails. Saw one Wilson's Snipe. Weather has been very cold, mercury below zero for three nights, everything frozen, ice on canal 4 inches thick." These birds were not in holes, were not hibernating, nor were they sick. I flushed them from a tussock of dried grass in a marsh along the Ohio canal. They could and did fly well. It is impossible to tell how long they would have remained in this locality had I not killed them, but I trust they would have staid later than December 12.—HOWARD JONES, *Circleville, Ohio.*

BREEDING OF THE MALLARD IN NEW ENGLAND.—With reference to the statement in Stearns's "New England Bird-Life," that the authorities do not appear to be aware of the breeding of the Mallard in New England, I receive a note from Mr. Elisha Slade of Somerset, Mass., to the effect that the bird is a regular breeder in his neighborhood.—ELLIOTT COUES, *Washington, D. C.*

THE GLAUCOUS GULL (*Larus glaucus*) AT PORTLAND, MAINE.—An instance of this Gull's occurrence in the vicinity of Portland is at last furnished by the capture of a specimen at Peake's Island, April 27, 1883. I examined the bird in the shop of Mr. John Fleming of Portland, to whom it was sent for preservation.—NATHAN CLIFFORD BROWN, *Portland, Me.*

THE COMMON CORMORANT ON THE COAST OF SOUTH CAROLINA.—In the collection of the College of Charleston (South Carolina) I have lately examined two specimens of *Graculus carbo* which are labelled as having been captured near that city. The southward wanderings of the species on the Atlantic coast do not seem to have been previously traced beyond the Middle States.—WILLIAM BREWSTER, *Cambridge, Mass.*

OCCURRENCE OF THE NORTHERN PHALAROPE AND AUDUBON'S WARBLER, AND NESTING OF THE MOCKING BIRD, IN WESTERN KANSAS.—Fort Wallace, where the following observations were made, is situated on the Kansas Pacific Railway, within twenty-five miles of the west line of

the State, at an altitude of 3,319 feet. May 25, 1883; near the Fort I saw on a pond made by damming the south fork of the Smoky-hill River a pair of little birds swimming near the centre with a small flock of American Eared Grebes. From their motions and position on the water I knew they were Phalaropes, but saw they were too small for Wilson's, which is a common migrant through Eastern Kansas; also I had never noticed the latter birds resting upon the water, or swimming, except short distances on their feeding grounds, or when winged by a shot; but I could not make out with certainty whether they were the Northern or the Red Phalarope. So I laid down in a hollow at the edge of the bank and watched them for a long time, hoping the wind, which was strong and favorable, would drift them within shot, but they kept in the centre of the pond, and when they did rise circled spirally to a height of about one hundred feet, then struck north. *Gone*, and my disappointment was great! As I lay there estimating the distance, and blaming myself for not venturing a shot, my hopes were revived by the sight of a flock of fifteen or sixteen winging their way down the pond and alighting with the Grebes at the place where the others were seen. Instead of quietly resting, like the mated pair, they began chasing each other with tremulous wings and bobbing of heads. The males (the plainest bird, an exception to the rule) were doing their best to appear brave and attractive. Their actions during courtship are peculiar and ludicrous, much like those of Wilson's Phalarope, which I have watched on their love or mating grounds. The birds only remained a short time, arising in a body from the water and circling like the first. I quickly slipped into my gun a couple of shells loaded with No. 6 shot, and dropped five of the birds, which the wind soon brought to the shore; on picking them up they proved to be the Northern Phalarope (*Lobipes hyperboreus*), two males and three females. These birds are found along the coast of the Pacific, as well as on the Atlantic coast, but I think their occurrence so far inland worthy of note. I measured the birds but only mounted one, as I have a pair in my collection, shot in the Bay of Fundy on the tide streaks, known as "rippplings," where the birds gather to feed upon the minute snails and other forms of life on the drift. The shrimps, feeding upon the same, herrings feeding upon the shrimps, pollock, like hungry hogs, often leaping out of the water in their eager haste to catch the herrings, and the gulls screaming and swooping down for their share, make up a wild and exciting scene in the never-ending struggle for life, the strong preying upon the weak.

Two days later, in the same vicinity, I saw, on the ground and in the willows and stunted cottonwoods skirting the stream, several Audubon's Warblers (*Dendroica auduboni*). To remove any doubts of their identity I shot one of the birds. I found them in 1882 an abundant-winter sojourner at San Diego, California, and noticed their arrival at Whatcom, Washington Territory, the last of March following; and I occasionally saw and heard them singing along the coast of the Straits of Fuca to Neale Bay, a few remaining to breed, but the most wending their way farther north. Dr. Coues, in his "Birds of the Northwest," says of their

range, "east to Fort Laramie," and without doubt we may add, Western Kansas, their extreme eastern limit.

At the same time and place I saw in the cottonwoods two pairs of Mocking Birds (*Mimus polyglottus*). From song and action they seemed to be nesting, and I was informed by a gentleman who had resided in the vicinity several years, that a pair nested and reared their young last season; but they were the first "Mockers" he ever noticed there. The birds are common summer residents in Eastern Kansas, but their nesting, or even occurrence, at so great a height in latitude 39°, must be rare and exceptional.—N. S. Goss, *Topeka, Kan.*

A CALIFORNIA BIRD-WAVE.—In the spring of 1877 I was collecting birds in the neighborhood of Campo, San Diego Co., California. This place is about forty-five miles east of San Diego, and near the summit of the range, which is there low—about 2500 feet altitude. On April 27 I had a very good chance to observe a migration in one particular locality. The place seemed to be a birds' highway. The narrow, brush-covered valley had a strip of evergreen oaks running down the middle. It sloped south, and a couple of miles below fell into a deep cañon crossing it at right angles. On each side were low mountains, contracting the valley to less than a quarter of a mile in width. A strong west wind was blowing across the valley. An almost constant stream of birds was passing northward along the *windward* side of the strip of oaks, keeping close to the tops of the brush.

The weather for several days previous had been cold and stormy, but was now clear and warm, and the migrants seemed disposed to make up for lost time. They flew steadily along at a business gait, seldom stopping to feed, then only hurriedly, making short stops usually of but a few seconds and working north all the time. *Dendrocæa occidentalis* was perhaps the most numerous, coming by twos and threes, and even half a dozen together. The high wind made their flight very erratic, and I found it impossible to shoot them on the wing. One lit on the ground among some Chipping Sparrows. *D. townsendi* also was present in small numbers. Hummers of several species were especially abundant, but none stopped. Among them were some very small Hummers, possibly *Calypte costae*, but they appeared too small for even this species. I fired several times but got none. The balance of the migrants were various common birds.

From memory I should say that a dozen to twenty birds passed each minute, and at one point practically all passed over a space of less than fifty yards in width. The travelling flight of the Hummers was wavy, similar to that of a Woodpecker, and the flight of all the others seemed to partake of the same undulatory character, although that might have been caused by the high wind.—F. STEPHENS, *San Bernardino, California.*

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CONTENTS.

PAGE.

LIST OF BIRDS OBSERVED IN THE VICINITY OF COLORADO SPRINGS, COLORADO, DURING MARCH, APRIL, AND MAY, 1882. By *F. A. Allen* and *William Brewster* 189

BIRDS OF THE LOWER URUGUAY. By *Walter B. Barrows*, ... 198

ON A BIRD NEW TO NORTHERN NORTH AMERICA. By *C. Hart Merriam, M. D.* 213

ON AN APPARENTLY NEW GULL FROM EASTERN NORTH AMERICA. By *William Brewster* 214

BREEDING OF THE HARLEQUIN DUCK (*Histrionicus minutus*). By *C. Hart Merriam, M. D.* 220

THE AMERICAN ORNITHOLOGIST'S UNION 221

RECENT LITERATURE.—Goss's Birds of Kansas, 227; Beckham's Birds of Nelson County, Kentucky, 227; Nutting and Ridgway on Costa Rican Birds, 228; Migration of Birds, 228; Bean's Notes on Birds collected in Alaska and Siberia, 231; Old World Birds in the National Museum, 231; Stejneger on the *Cyguine*, 231; Turner on *Lagopus mutus* and its Varieties, 232; Reichenow "Die Vogel der zoologischen Gärten," 232;

Reichenow's "Die Entenvögel der zoologischen Gärten, 232; Linden on Domestication of Wild Ducks, 233; Minor Ornithological Publications, 233.

GENERAL NOTES.—The Willow Thrush and Holböhl's Linnet in Illinois, 239; Nest and Eggs of *Myiadestes townsendi*, 239; The Mockingbird in Western Kansas and the Northern Phalarope in Southern Wyoming, 240; The Gray-crowned Finch in Confinement, 240; Description of the Nest and Young of the Pygmy Owl (*Glaucidium guoma*), 242; The Bald Eagle fishing, 242; A Flock of White Herons (*Herodias egretta*) in Eastern Massachusetts, 242; *Herodias egretta* at Amherst, 243; Wilson's Snipe (*Gallinago wilsoni*) nesting in Massachusetts, 243; Baird's Sandpiper at Scarborough, Maine, 243; Cory's Shearwater (*Puffinus borealis*) off the Coast of Massachusetts, 244; Addendum to List of Birds ascertained to occur within ten miles from Pont de Monts, Province of Quebec, Canada; based chiefly upon the notes of Napoleon A. Comeau, 244; The Movements of Certain Winter Birds, 245; The Ridgway Ornithological Club of Chicago, 246.

INDEX 247

Cambridge, Mass. :

PUBLISHED BY THE CLUB.

IMPORTANT NOTICE.

THE **First Series** of the BULLETIN OF THE NUTTALL ORNITHOLOGICAL CLUB closes with the **present volume**. A **Second Series**, with change of name, will begin with **January, 1884**, under the auspices of the AMERICAN ORNITHOLOGISTS' UNION, and under the Editorial Management of MR. J. A. ALLEN, assisted by a Staff of Associate-Editors.

The first number of the New Series will be sent to all present subscribers to the BULLETIN, in the hope that they will be pleased to subscribe to the Journal under its new auspices and name.

Terms of subscription, and other information of interest to Subscribers, will be given in the **Prospectus** accompanying the first number of the new publication.

Communications intended for publication should be sent, as heretofore, to

J. A. ALLEN, Cambridge, Mass.

It is to be hoped that the many friends of the Bulletin will extend their hearty support to the new publication, freely contributing their observations to its pages, and using their influence to extend its usefulness.

WANTED.

A copy of the *original edition* of Nuttall's "A Manual of the Ornithology of the United States and Canada" (Land Birds, 1832; Water Birds, 1834).

Also, the "American Monthly Magazine" (Vols. I-IV, 1817-18), and the second American edition (1815) of "Guthrie's Geography," the latter containing Ord's list of American Birds.

Any one having a copy of either of these works which they are willing to part with will please address (stating condition and price) J. A. Allen, Cambridge, Mass.

BULLETIN

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VOL. VIII.

OCTOBER, 1883.

No. 4.

LIST OF BIRDS OBSERVED IN THE VICINITY OF COLORADO SPRINGS, COLORADO, DURING MARCH, APRIL, AND MAY, 1882.

BY J. A. ALLEN AND WILLIAM BREWSTER.

(Concluded from p. 161.)

54. **Poecetes gramineus confinis**. GRASS FINCH.—First observed April 19. They soon became abundant, frequenting alike the open plains and the borders of thickets.

Colorado furnishes the most typical examples of *confinis* that I have seen. Some of our specimens actually have the bill as slender as that of *Passerculus savanna*. Were the distribution of the form limited to this region it would constitute a strongly characterized variety.

55. **Melospiza lincolni**. LINCOLN'S SPARROW.—More or less frequent in thickets along creeks from April 28 till about May 15.

56. **Melospiza fasciata fallax**. GRAY SONG SPARROW.—A few were observed during the latter part of March and one about April 10. Rare.

57. **Junco hiemalis oregonus**. OREGON SNOW-BIRD.—A single specimen was taken April 26 and another the next day. These were the only ones observed. They were in company with *Zonotrichia leucophrys* and *Z. intermedia*.

Two females, taken respectively April 26 and 27, are apparently referable to *Junco oregonus*, although in many respects peculiar. The ash of

the throat is not darker than in some examples of *hiemalis*, but its posterior outline is convex, as it should be with *oregonus*, and the ash does not extend along the sides of the body, which are only faintly washed with pinkish-brown. The upper parts are nearly uniform dingy olive-brown, inclining to ashy on the rump, but with no appreciable ashy on the crown or nape, where the brown is of even a lighter shade than on the back.

Mr. Brown has called attention* to similar specimens from Texas, several of which, now in my collection, are identical with these Colorado ones. I agree with Mr. Brown in considering them intermediates between *hiemalis* and *oregonus*.

58. **Junco annectens.** PINK-SIDED SNOWBIRD. — Very common during March and the early part of April. Last seen April 25.

59. **Junco aikenii.** WHITE-WINGED SNOWBIRD. — A single specimen was shot April 11, the only one positively identified.

A specimen (No. 7518, Coll. W. B.) taken by Mr. Aiken in El Paso County, Colorado, February 24, 1874, is peculiar in having the entire outer webs of the first two primaries, and a broad edging on the outer webs of the next three, snowy white to the tips of the feathers. The secondaries and tertials also, are broadly tipped with white and the wing-bands are exceptionally broad and pure, the general effect of the folded wing being white rather than dark. Elsewhere the coloring is normal.

Among Mr. Aiken's extensive series of these Snowbirds I found no specimens which showed any intergradation between *J. aikenii* and its allies.

60. **Junco caniceps.** GRAY-HEADED SNOWBIRD. — More or less common till about May 1.

61. **Spizella socialis arizonæ.** ARIZONA CHIPPING SPARROW. — Observed daily in small numbers from April 11 till May 8. At the latter date they became much more numerous, being met with in flocks, sometimes of large size, from this time till about May 20. They were especially abundant during a period of cold, stormy weather, lasting from May 8 to 14 in ravines bordered by oak scrub. A flock seen at Austin's Bluffs, May 13, must have contained at least a thousand birds, and flocks containing hundreds were repeatedly met with. There were with them usually a few Brewer's Sparrows.

The essential characters of this race, as compared with *socialis*, seem to me to be its longer tail and wings, lighter ashy about the head and neck, narrower dorsal streaks and the very much paler, more ochraceous ground color of the interscapular area. Weighed by these characters the variety is a constant and easily recognizable one. But in the series before me (embracing about thirty examples) all the other differences which

* This Bulletin, Vol. VII, p. 38.

have been claimed prove inconstant. Thus in the majority of specimens the bill is not appreciably narrower, nor the "rufous of the crown lighter and less purplish," while the alleged fine black streaks on the occiput are quite as often absent as in *S. socialis*. The character of the wing-bands also is similarly variable.

62. **Spizella pallida.** CLAY-COLORED SPARROW.—Apparently not common. One was taken May 4 and another May 9. A few were seen May 11.

63. **Spizella breweri.** BREWER'S SPARROW.—Common as early as May 10, when several were taken. They associated with *S. socialis arizonæ*, but formed only an inconsiderable portion of the large flocks above-mentioned. Later they were found in oak scrub.

64. **Zonotrichia leucophrys.** WHITE-CROWNED SPARROW.—First seen April 24, and were more or less common for several weeks, associating in small parties with *Z. gambeli intermedia*.

65. **Zonotrichia gambeli intermedia.** RIDGWAY'S SPARROW.—Probably arrived with the last about April 24; as specimens of each were killed at the same shot April 28. Small parties were met with till the middle of May, at first in dry ravines and oak scrub, but later they resorted to the willow thickets of the creek bottoms. They were much more numerous than *Z. leucophrys*.

66. **Chondestes grammicus strigatus.** LARK FINCH.—Became common May 8, when they were first seen.

67. **Calamospiza bicolor.** LARK BUNTING.—First seen May 13—a flock of about two hundred, all males, flying in a compact body through a ravine in Austin's Bluffs. They immediately became common on the plains near town.

68. **Zamelodia melanocephala.** BLACK-HEADED GROSBEEK.—Appeared May 12, and immediately became common.

69. **Passerina amoena.** LAZULI FINCH.—Two males were seen May 8. Became common May 12.

70. **Pipilo maculatus megalonyx.** SPURRED TOWHEE.—First seen about April 7; gradually became common.

My series of sixteen specimens is a puzzling one. Among the males the majority have the white of the outer webs of the external rectrices confluent with the terminal spaces on the inner webs (a character of *arcticus*); while in all, the bases of the primaries are white on their outer webs and in two specimens this white extends uninterruptedly along the web to the tip of the feather, thus fulfilling one of the most essential

characters of *arcticus*. On the other hand, nearly half have the scapular spots edged and tipped with black, as in typical *megalonyx*. The length of the claws is variable in different specimens and often variable in the different feet of the same bird. An arbitrary assignment of these males by the characters given in standard descriptions, and without regard to locality, would result in the reference of two to *arcticus*, three or four to *megalonyx*, and a remainder variously intermediate between the two. The four females are all typical of *megalonyx*, with which, rather curiously, the female seems to be better characterized than the male.

Among the *Pipilos* with spotted scapulars three races may be easily recognized:—viz. *maculatus* of Mexico, in which the adult male combines the usual black head and neck with an olivaceous back seen only in the females of more northern forms; *arcticus* of the Missouri region, which has the outer webs of the spotted scapulars and of the outer rectrices wholly white; and *oregonus* of the coast region of Oregon and Washington Territory, which has the white of the scapulars edged and tipped externally with black and the outer webs of the external rectrices almost wholly black. The variety *megalonyx* is simply an intermediate between *arcticus* and *oregonus*. It cannot be said to have any distinctive peculiarities and it combines the characters of its allies in such varying degrees over the wide extent of its range that each locality seems to furnish a style of its own. This, to a certain extent, is true also of *arcticus* and *oregonus*, really typical examples of which are comparatively seldom met with. The aberrant ones of both are usually referred to *megalonyx* which has thus become a convenient receptacle, so to speak, of everything that is not pure *arcticus* or *oregonus*. Hence one of the worst muddles which at present exists to confuse the student of North American birds.

One way out of the difficulty would be to suppress *megalonyx* and extend the characters and distribution of *arcticus* and *oregonus*. But the matter cannot be summarily settled, for any arrangement that shall aspire to be final must be based on intelligent study of very extensive material.

71. **Pipilo chlorurus.** GREEN TOWHEE.—Seen as early as April 27, but was not common till about May 8; were then abundant till about May 16. In June were found breeding abundantly on West Monument Creek at the edge of the plains. (For notice of an hermaphrodite specimen taken, see this Bulletin, VIII, p. 17.)

72. **Dolichonyx oryzivorus.** BOBOLINK.—A single specimen was brought to Mr. Aiken May 18, and another May 23; two others reported as seen. But two specimens were previously known to Mr. Aiken as having been killed here.

73. **Molothrus ater.** COWBIRD.—Apparently not common.

74. **Agelæus phoeniceus.** RED-WINGED BLACKBIRD.—

Common in flocks from March 21 till about May 15, when they apparently dispersed to breed.

75. **Xanthocephalus icterocephalus.** YELLOW-HEADED BLACKBIRD.—An adult male was shot May 2, and several females were seen on the following day. We were informed that they occurred in numbers at a ranch twelve miles south of Colorado Springs.

76. **Scolecophagus cyanocephalus.** BREWER'S BLACKBIRD.—Common in flocks after April 25, frequently associated with Redwings.

77. **Sturnella magna neglecta.** WESTERN MEADOW LARK.—Very common. Seen as early as March 20; doubtless winters.

78. **Icterus bullocki.** BULLOCK'S ORIOLE.—Arrived May 12, and immediately became common.

79. **Corvus corax?** RAVEN.—Two birds seen flying at a distance April 7, were apparently of this species, but may have been *C. cryptoleucus*, formerly common here, according to Mr. Aiken, but now rare.

80. **Gymnocitta cyanocephala.** BLUE NUTCRACKER.—Several small flocks, very restless and shy, were seen in April and the early-part of May.

81. **Pica rustica hudsonica.** MAGPIE.—Resident. Small flocks were seen in March, and single pairs here and there in April and May.

82. **Cyanocitta stelleri maculophya.** LONG-CRESTED JAY.—Very abundant in the wooded creek bottoms till about May 17, when they apparently retired to the foothills and mountains to breed. Several pairs were seen daily during the breeding season on the West Monument, at the edge of the foothills.

83. **Aphelocoma woodhousii.** WOODHOUSE'S JAY.—Not infrequent, but wary and difficult to approach. Began nesting the last week of April.

84. **Eremophila alpestris leucolæma.** WESTERN HORNED LARK.—An abundant resident, frequenting in winter the outskirts of the town as well as the adjacent plains. A nest with two fresh eggs was taken about April 1; full-fledged young were seen April 22 and later.

A large series, taken after the beginning of the breeding season and

hence representing the resident form, shows only a limited amount of individual variation, the characteristic style of color and markings being very uniformly presented. The general coloring is very pale—quite up to the standard of typical *leucolæma*, and the peculiar pinkish of certain parts is bleached to a nearly obsolete tint. The black shield on the breast is restricted to the minimum size, but the black bar on the crown is always at least twice the width of the white on the forehead, or quite as broad as in *alpestris* and *chrysolæma*. The throat is usually pale yellow but there is never any yellow on the breast, and rarely any on the forehead or sides of the head. Only one example has a pure white throat, but in several the yellow is restricted to a mere tinge on the chin.

These specimens are uniformly smaller than eastern examples of *alpestris*, and hence smaller than typical examples of *leucolæma* which, according to Dr. Coues, should be about the size of *alpestris*. The measurements of an average Colorado specimen are as follows: Wing, 4.20; tail, 2.98; tarsus, .82; culmen from feathers, .46.

In "Birds of the Colorado Valley" (p. 187), Dr. Coues gives the breeding range of *E. leucolæma* as "plains of the United States, north of about 40°," and refers all the birds which breed south of this parallel, to the eastward as well as westward of the Rocky Mountains, to var. *chrysolæma*. This arrangement seems to me questionable. In a series of nearly one hundred Horned Larks from various points on the plains east of the Rocky Mountains, I find only a slight variation with latitude. There is, to be sure, a gradual diminution in size from north to south but this is not accompanied by any decided changes of color, and, making allowance for local variations, the region at large, between the Rocky Mountains and the Mississippi River and the British and Mexican boundaries, furnishes a style which in its generally pallid coloration and restricted markings fulfills the essential characters of variety *leucolæma*. Furthermore the Horned Lark of Colorado and New Mexico (represented in my series by breeding specimens from Santa Fé), is a widely different bird from the bright-colored form which we get from California, and which passes current as typical *chrysolæma*. Whether this California race is really identical with the *chrysolæma* of Mexico or not I have no present means of judging, but if it be so, the alternative with the birds just discussed is to call them all *leucolæma*, or to separate the southern representatives under a new name. If the latter are true *chrysolæma* the California form must be re-named. In either case the California and Colorado forms cannot be considered identical.

The proper position of the Horned Larks which breed east of the Mississippi in the United States is also a matter that requires further investigation. Such specimens have been usually referred to *alpestris*, but all that I have differ considerably from that form. Four examples taken at Ann Arbor, Michigan, have scarcely any yellow about the head, and in one of them the throat and chin are pure white. Specimens from Southern Illinois are rather smaller and richer colored, but still

paler than Atlantic Coast birds. On the whole all of these specimens seem to me to be nearer *leucolæma* than *alpestris*. If the breeding range of *leucolæma* could be extended, without too much violence, to embrace the whole of the United States east of the Rocky Mountains (and perhaps of the Sierras as well), and that of *alpestris* proper restricted to regions north of our northern boundaries the case would be simplified. But the material which I have examined, although suggesting some such arrangement, is by no means extensive enough to warrant its serious proposal here.

85. **Tyrannus carolinensis**. KING BIRD. — Arrived May 10. Not uncommon in suitable localities.

86. **Tyrannus verticalis**. ARKANSAS FLYCATCHER. — Common. Abundant for several days on its first arrival, May 8.

87. **Tyrannus vociferans**. CASSIN'S FLYCATCHER. — A few seen with the preceding May 8 to 12.

88. **Sayiornis sayi**. SAY'S FLYCATCHER. — Arrived March 30; were frequent in the town and elsewhere till May 8, when for a few days they were abundant. Later they were much less common, — a pair here and there where they found favorable breeding sites, usually the outbuildings of ranches.

89. **Contopus borealis**. OLIVE-SIDED FLYCATCHER. — First seen May 17, when a pair was shot and others were seen. Occasionally observed later.

90. **Contopus virens richardsoni**. WESTERN WOOD PEWEE. — Taken May 18 and seen occasionally later. Common in summer on the West Monument.

91. **Empidonax minimus**. LEAST FLYCATCHER. — One taken May 4 and another May 9 were the only ones identified.

92. **Empidonax obscurus**. WRIGHT'S FLYCATCHER. — First observed April 25. Numerous specimens were taken later, it being, at least during the first half of May, the common *Empidonax* of the region.

93. **Empidonax hammondi**. HAMMOND'S FLYCATCHER. — Arrived a little later than the preceding and was rather less common.

94. **Empidonax flaviventris difficilis**. WESTERN YELLOW-BELLIED FLYCATCHER. — A single specimen taken May 20.

95. **Antrostomus nuttalli**. NUTTALL'S WHIPPOORWILL. — A single specimen was shot May 3 in Austin's Bluffs — the only one met with in our numerous excursions in April and May, although probably not rare during the latter month in suitable localities. During the breeding season they were heard every

evening on the West Monument, and not infrequently came close to the house at dusk, after the manner of the common Whippoorwill in the east.

96. **Chordeiles popetue henryi.** WESTERN NIGHT-HAWK.—Abundant. Arrived about June 1.

97. **Cypselus saxatilis.** WHITE-THROATED SWIFT.—A few were seen in the Garden of the Gods, March 24. Before April 10, the next time the locality was visited, they had arrived in full force. On April 7 they were observed flying over the fields near the entrance to South Cheyenne Cañon. Occasionally observed later still further out on the plains. In addition to the large colony in the Garden of the Gods, others inhabit the two Cheyenne Cañons and William's Cañon, and doubtless other mountain gorges of the vicinity.

98. **Selasphorus platycercus.** BROAD-TAILED HUMMING BIRD.—First seen May 12. More or less common, but restless and hard to capture.

99. **Ceryle alcyon.** KINGFISHER.—A single individual seen May 10. A few pairs noted later.

100. **Picus villosus harrisi.** HARRIS'S WOODPECKER.—A pair taken May 8 and a few others seen in June. Not common.

101. **Picus pubescens gairdneri.** GAIRDNER'S WOODPECKER.—Rare. Only two seen in all our excursions, till a pair or two were met with on the West Monument in the breeding season.

102. **Sphyrapicus varius nuchalis.** NUCHAL WOODPECKER.—Not common. A few specimens were taken in April and one seen May 3.

103. **Sphyrapicus thyroides.** BROWN-HEADED WOODPECKER.—A male taken April 5, and a female taken April 15 were the only ones seen.

104. **Melanerpes erythrocephalus.** RED-HEADED WOODPECKER.—Began to arrive about May 18, but were not common till a week or ten days later.

105. **Melanerpes torquatus.** LEWIS'S WOODPECKER.—Seen occasionally from April 25 till May 12. Also in the breeding season on the West Monument.

106. **Colaptes auratus mexicanus.** RED-SHAFTED WOODPECKER.—Forms of *Colaptes* were more or less common during the last half of March and April, most of the specimens taken,

presenting various combinations of the characters of *auratus* and *mexicanus*. The few taken later proved to be all *mexicanus*, which Mr. Aiken tells us is the resident form, the "hybrids" being migrants.

107. **Asio wilsonianus**. LONG-EARED OWL.—Saw a number of fresh specimens at Mr. Aiken's, killed in March and the early part of April.

108. **Speotyto cunicularia hypogæa**. BURROWING OWL.—Several colonies on the plains within a few miles of Colorado Springs.

109. **Circus cyaneus hudsonius**. MARSH HAWK.—Occasionally seen.

110. **Accipiter fuscus**. SHARP-SHINNED HAWK.—Seen a few times in April.

111. **Accipiter cooperi**. COOPER'S HAWK.—Occasionally seen in April and May.

112. **Falco mexicanus**. AMERICAN LANIER FALCON.—Several pairs seen in April.

113. **Falco sparverius**. SPARROW HAWK.—Common.

114. **Falco richardsoni**.—Several Pigeon Hawks were seen at a distance and one adult male near enough to be recognized as of this species.

115. **Buteo swainsoni**. SWAINSON'S BUZZARD.—Not common.

116. **Archibuteo ferrugineus**. FERRUGINEOUS ROUGH-LEGGED BUZZARD.—A few seen but none taken.

117. **Aquila chrysaëtus**. GOLDEN EAGLE.—Frequently seen. An eyrie was discovered near the entrance to North Cheyenne Cañon, from which young were taken about June 1.

118. **Cathartes aura**. TURKEY BUZZARD.—Rare. Only a few times observed.

119. **Zenaidura carolinensis**. CAROLINA DOVE.—Abundant. Arrived April 20; found nesting May 15, on the ground.

120. **Ægialites vociferus**. KILLDEER PLOVER.—Not common. First seen March 27.

121. **Ægialites montanus**. MOUNTAIN PLOVER.—Not uncommon. First observed April 19. A perfect egg was taken from a female shot May 9.

122. **Macrorhamphus griseus scolopaceus**. WESTERN RED-BREASTED SNIPE.—Saw one example taken May 9.

123. **Ereunetes pusillus.** SEMIPALMATED SANDPIPER.—Saw fresh specimens at Mr. Aiken's, taken May 1.
124. **Symphemia semipalmata.** WILLET.—A few were taken by gunners near Colorado Springs May 1 to 10.
125. **Rhyacophilus solitarius.** SOLITARY TATTLER.—Fresh specimens were brought to Mr. Aiken May 1.
126. **Tringoides macularius.** SPOTTED SANDPIPER.—Not common. First seen about May 1.
127. **Bartramia longicauda.** BARTRAMIAN SANDPIPER. Large numbers were brought in by gunners April 28.
128. **Gallinula galeata.** FLORIDA GALLINULE.—Saw one in the flesh taken May 9.
129. **Anas boscas.** MALLARD.—Saw specimens taken May 9.
130. **Querquedula cyanoptera.** CINNAMON TEAL.—Saw specimens taken by gunners May 9.
131. **Spatula clypeata.** SHOVELLER.—Saw a few taken by gunners May 9. These three species of Ducks were quite numerous at a few favorable points during the early part of May.
132. **Larus delawarensis.** RING-BILLED GULL.—Rare. One was shot near town during the first week in May.
133. **Sterna forsteri.** FORSTER'S TERN.—Taken at rare intervals, according to Mr. Aiken.
134. **Podiceps auritus californicus.** AMERICAN EARED GREBE.—Saw a specimen in the flesh at Mr. Aiken's, killed May 1.
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BIRDS OF THE LOWER URUGUAY.

BY WALTER B. BARROWS.

(Continued from p. 143.)

60. **Phylloscartes ventralis** (*Temm.*).—Among the low bushes bordering the streams this bird was noticed several times in July. Owing to its diminutive size and sober coloring it was probably often overlooked and may have been much more plenty than it seemed.

61. **Hapalocercus flaviventris** *Lafr. et d'Orb.*—Abundant in summer in wet marshes and among the rank grass and rushes about ponds and streams. Its rasping notes, energetic movements, and yellow underparts make it quite conspicuous, although one of the smallest species taken. It certainly breeds here, and doubtless also as far south as Carhué, many individuals being seen near that place in March, 1881, but I was unable to learn anything of its nesting habits.

62. **Serpophaga subcristata** (*Vieill.*).—This tiny Fly-catcher much resembles in general habits our own Least Fly-catcher (*Empidonax minimus*), but its motions and notes are much less energetic. It was noticed only in summer and always among trees or bushes. Nests were taken from October 14 until late in November. They were all similar in material and construction, being made of various cottony fibres, wool, and fine hair, and seated among thorny twigs, usually in a fork and at distances from the ground varying from three to fifteen feet. The eggs were commonly three, white, with a buffy tint, and unmarked.

63. **Serpophaga nigricans** (*Vieill.*).—During the cool weather—from April to September—this plain but pretty species was found among the rushes of every marsh and stream which was visited, both at Concepcion and further south. It seemed particularly fond of the rushes, and among these frequently half a dozen were in sight at once, spreading and flirting their tails and making short sallies for passing insects, always uttering their characteristic *chuck*, which was the only note heard.

Very few remain at Concepcion through summer, and those which do are found most often among the interlacing roots and half-fallen bushes along the river margins. The only nest which I found was a bulky structure composed largely of dark, fibrous moss mixed with grass and lined with finer material of the same kind. It was half swung, half seated on a leafless branch which drooped from the roof of one of those cobwebby, natural arbors formed by masses of vines striving to cover up and hide the bushes which they have killed. This nest, with its three white eggs and the parent bird, was secured at Concepcion, December 7, 1880. It was close to the undermined bank of the stream where it could only be seen from a boat passing close under the overhanging bushes.

64. **Cyanotis azaræ** (*Naum.*).—For a few days only during the spring migration (about September 1) at Concepcion the reeds, flags, and water-loving shrubs were fairly alive with these little gems. They were again met with in some numbers on the Pigué and at Carhué the last of March and first of April following. Of their summer home I know nothing. The older name, *Regulus omnicolor*, suggests much which is true of the bird. In color he combines black, white, lemon-yellow, olive-green, deep velvety blue and strongest ruby-red. In habit he reminds one forcibly of both Warbler and Kinglet, and, like the latter, he often hovers before the tip of a flag or reed to pick out some minute grub, or darts off to snap up with ease some passing gnat. In spring he has quite a sprightly little song, not very unlike that of our Redstart (*Setophaga ruticilla*).

65. **Elainea albiceps** (*Lafr. et d'Orb.*).—Three males were taken at Concepcion during the last half of August, 1880, and one or two others were observed, but it must be one of the least abundant Flycatchers at that point.

66. **Elainea modesta**.—The only specimen taken was a female which was shot from a nest at Concepcion November 30, 1880. The nest was a shallow affair built of twigs and roots, and placed on the horizontal branch of a straggling tree about five feet from the ground. It contained two eggs which were white, sparsely spotted with brown.

67. **Pitangus bellicosus** (*Vieill.*). BIEN-TE-VEO (I-SEE-YOU-WELL).—Almost the first bird which attracts a stranger's attention as he rides out into the country. The loud, unmusical cry salutes him from every grove or willow-clump and the bird himself is frequently seen directing his heavy, undulating flight from one tree to another. Grasshoppers and other clumsy insects are frequently taken on the wing, but quite as often the bird alights to pick them up from the ground. Most of the birds have nests as early as October 5, but they may be found with fresh eggs as late as the middle of December, and at all times between these dates. Doubtless two broods are often reared, but as the birds suffer much from the depredations of opossums and large lizards, many of the later nests are only second or third attempts to raise a family. The nest is a bulky and conspicuous object formed of a great variety of soft materials, among which grass and wool are always found. It is often more than a foot in diameter and

sometimes perfectly spherical, though oftener of a depressed globular form, and with a large hole in the side, which is rarely round or neatly finished. The site of the nest seems to be selected with some care and doubtless with some important end in view, though what it may be I cannot say, unless it have reference to the visits of the enemies above alluded to. At all events a very large proportion of the nests are placed on trees or bushes which either extend directly out over water or else overhang some bank, bluff, or abrupt depression so that it is often difficult for a person to examine the nest even when it is not twenty feet in a direct line from the root of the tree. Out of at least twenty-five nests examined, about two thirds overhung the water and were reached by standing up in a boat and drawing down the branch or branches which held them. Of the remainder, only two or three were built on trees which stood on level ground.

The eggs are usually five in number, sometimes but four, and often only three, in nests found in November or December. In color they vary from pearly-white to buffy-white, dashed more or less thickly with spots of brown or black. We did not meet with this bird at Azul or further south, and I believe it is never found far from water, or in regions where timber is very scarce.

68. **Myiodynastes solitarius** (*Vieill.*).—The first specimen of this fine Flycatcher which I saw was brought to me by a boy who killed it with a rubber "sling" among the Paradise trees in the Plaza at Concepcion. This was on November 26, and only two more specimens were secured in the next month's collecting, though several others were observed. They kept mostly among the large trees along the river banks where they may perhaps breed, though their proper home is further up the river in Paraguay and Brazil.

69. **Myiobius naevius** (*Bodd.*).—A rather scarce spring migrant occurring singly or in pairs during September and October. It was usually found among thorny bushes in comparatively open and wet ground.

70. **Pyrocephalus rubineus** (*Bodd.*). BRASA DE FUEGO (COAL OF FIRE) and CHURRINCHE. (This latter name is also applied to any of the other small Flycatchers, but I could not find out what it signified.)—The Vermilion Flycatcher is an abundant summer resident at Concepcion, arriving about the

middle of September and leaving soon after the first of April.

The nest is built the last of November or first of December. It is usually made of twigs, grass, etc., and there is almost always some attempt at concealment, made by the addition of bits of bark and moss to the outside. One found December 1, 1879, was built on the horizontal stalk of a half dead cactus (*Opuntia*) which stood in an open, sandy field at a distance from any trees. It was remarkably shallow and the two eggs which it contained were exact miniatures of heavily spotted eggs of the Common Tern (*Sterna hirundo*). Other nests, though better sheltered than this one, were always in comparatively exposed situations, on the horizontal limbs of trees and seldom more than four or five feet from the ground, yet they were not easy to find, even after the parents had shown by their anxiety that they could not be many yards away. I never started the male from the eggs, but always the female.

71. **Myiarchus tyrannulus** (Müll.).—First seen November 20, 1880; afterwards occasionally and in pairs until the first week in January, 1881, when I left Concepcion. On December 28, I found a loose nest of hair, feathers, etc., in a hollow stub five feet from the ground. It contained three eggs which in color and markings were precisely like those of *M. crinitus*, but a little smaller.

72. **Tyrannus melancholicus** Vieill.—This wanderer is not an uncommon summer resident at Concepcion where I found a straggling party of a dozen or more November 1, 1879. December 20, 1880, a nest with three eggs was taken from a slender bush which stretched out over one of the narrow river channels between the islands. The nest was compactly built of twigs, grass, and roots, and would easily have passed for an average nest of the Kingbird (*Tyrannus carolinensis*). The eggs were white, sparsely splashed with several shades of brown.

73. **Tyrannus aurantio-atro-cristatus** Lafr. et d'Orb.—A not very abundant summer resident, but one not easily overlooked, owing to its habit of perching on the topmost twig of any tree on which it alights, making forays from time to time when tempted by its winged prey. A nest found December 28, was a rather careless structure of twigs and roots placed among the thickest branchlets of a mimosa at a height of about eight feet. It contained two eggs (besides one of the Cowbird);

which were very similar to those of *Milvulus tyrannus*, but rather smaller.

74. *Milvulus tyrannus* (Linn). TIJERITA (LITTLE SCISSORS, in allusion to the tail).—By far the most abundant Fly-catcher which breeds at Concepcion. Arriving early in October, it breeds during November and December, and leaves for the north again before April 1. It was met with at Azul on January 31, 1881, and a single one was seen at Bahia Blanca February 9.

75. *Pachyrhamphus*, *sp. incog.*—Three males of a beautiful species probably belonging to this genus were taken at Concepcion during November, 1880. They were shy and silent, moving leisurely from one low tree to another along the borders of the streams.

76. *Phytotoma rutila* Vieill.—An abundant bird among shrubbery everywhere, especially in winter. Gravelly localities where the mimosas and other thorny shrubs alternate with the melon and prickly-pear cactuses and where there are occasional patches of brambles and creeping vines overrunning all, are favorite resorts. Here the brick-red breast of the male is a rather conspicuous object as he sits on the top of some low bush uttering from time to time that characteristic note which has been well likened by Hudson to the bleat of a new-born lamb. The nest, which may be found late in September or early in October, is quite frail and is commonly well hidden in the green interior of a prickly bush, or a mass of twining vines. It is built mostly of fine twigs and finer rootlets and in it the bird deposits usually three bluish-green eggs with brownish flecks. The birds feed largely on green leaves of various kinds with perhaps some berries and a few insects.

77. *Geositta cunicularia* (Vieill.).—Hardly more than a winter visitor at Concepcion, though a pair seen October 26 appeared to have eggs or young. In winter, however, it is very abundant and may be seen running about singly or in pairs on dry, grassy or gravelly places. It is strictly terrestrial and when running about singly it may be driven before one like a chicken. It has a rolling call similar to that of the Downy Woodpecker (*Picus pubescens*) but weaker, and a nervous way of flirting its wings and raising and dropping the tail which is common to many other birds of this group. It was abundant at Bahia

Blanca where it was occasionally seen running over the roofs of the houses. Of its breeding habits I know nothing, but most of the birds undoubtedly breed further south.

78. **Furnarius rufus** (Gm.). HORNERO (OVEN-BUILDER). —This bird has been so often and so thoroughly described that I do not feel like saying much about it. Its familiarity with man, its curiosity, its piercing notes and its strange, dome-shaped mud nest are all well known. At Concepcion it is one of the commonest residents and its nest may be seen in almost any street.

The nest is built of such mud as can be found near at hand, and if the mud contain grass-roots or similar fibres so much the better, but I do not think the birds worry themselves much about the quality of the materials. Although the eggs may not be laid until September or October, the birds often begin work on the nest as early as the middle of June, thus occupying three months or more in its completion. In fact I doubt if there is any month in the year when one cannot find Oven-birds at work on their nests. If the weather is dry they suspend work for a week or two until a shower refills the muddy pool from which they draw their building material, when they go on leisurely as before. This is the case only in winter, and when there is nothing to cause haste. In spring and summer the case is entirely otherwise; a nest may then be begun and finished within a week. But a winter-built house is usually much the best, and not a few such withstand the rain and heat for a year or more if not sooner pulled down by boys, iguanas, or birds of prey. The clayey mud bakes almost to brick and it is no easy matter even to break out a hole large enough to extract the eggs. The nests are rather less than a foot in greatest diameter, and though the eggs are not visible from the entrance the common statement that there is an "ante-chamber" to the nest seems to me not quite accurate. The nest is built very much like a spiral shell, and if one could remove the inner whorls from such a shell as *Ampullaria* he would have quite a fair miniature of the Hornero's nest. The eggs are seldom more than three in number, and are originally pure white, but being laid directly on the muddy floor of the nest they soon acquire about the same color. I have taken them from September 16 until January 15, but the larger number are, I think, laid during October.

79. **Upucerthia dumetoria** *Geoffr. et d'Orb.*—A few of these were met with on the crest of a little hill about three miles from the desolate little Indian village of Puan. In general habits they seemed to resemble *Geositta* more closely than any other bird, but were more frequently on the wing, besides differing totally in size and aspect from that bird.

At Carhué a few more were seen on April 6; but they were very shy and nothing was added to our knowledge of them there.

80. **Cinclodes fuscus** (*Vieill.*).—An abundant bird at Concepcion through the cold weather, frequenting sandy or muddy flats and avoiding bushy or grassy ground. In general appearance they remind one not a little of our smaller Thrushes (*T. fuscescens*, *pallasi*, etc.), but of course the resemblance is only superficial. They were often seen in scattered flocks of several hundred, or, to speak more correctly, several hundred were seen at the same time on a flat only eight or ten acres in extent, and after one or two had been shot the rest disappeared together, but not all in the same direction or in any order which could be called a flock.

They were rather abundant at Puan and Carhué from March 28 to April 8, but all seemed to be migrating. I know nothing of their breeding habits.

The next twelve species, belonging to the Synallaxine group, are chiefly interesting on account of the remarkable nests which they build. As a rule they are plain, inconspicuous, harsh-voiced little birds, resembling Wrens and Nuthatches in their movements, but with the stick-collecting propensity of the Wren developed to such a remarkable extent that were it not for the practical uses to which it is put we should say it was simply absurd.

These birds are very abundant at Concepcion, their nests being one of the most noticeable features of the landscape. There are places within two miles of the centre of the town where I have stood and counted, from one point within a radius of twenty rods, over two hundred of these curious nests, varying in size from that of a small pumpkin to more than the volume of a barrel. Often a single tree will contain half a dozen nests or more, and not unfrequently the nests of several different species are seen crowd-

ing each other out of shape on the same bush or tree. Most of the smaller species are so similar in color and motion that they cannot possibly be distinguished from each other at a distance of twenty feet. And it can easily be imagined how difficult it is to collect eggs and be *sure* of their identification. The eggs of most species are as much alike as the parents themselves,—often more so, for the eggs are always either white or pale blue, and unmarked; while there is really considerable difference in color and pattern among the birds. The few notes which I have brought together here may seem very scanty as the outcome of work among such wealth of material, but such as they are I offer them with some confidence in their accuracy, for the reason that they *are* few, and that they were not hastily taken.

81. **Phlæocryptes melanops** (*Vieill.*).—We first met with this species near Bahía Blanca in February, 1881. It was here restricted to the rushes bordering the stream, and in suitable localities was quite abundant, but its habit of skulking close along the bank under the cover of the thickest grass and rushes made it a difficult bird to secure. We afterward found it to be abundant along every stream on the pampas which we visited. Bulky, spherical nests, eight or ten inches in diameter and composed of rushes, grass, and mud, were several times found swung amongst the reeds overhanging the water, and doubtless they belonged to these birds, but as it was then late autumn they were all empty and more or less dilapidated.

82. **Leptasthenura ægithaloides** (*Kittl.*). ESPINERO CHIQUITO (TINY THORN-BIRD).—The smallest species of the family, and readily distinguished also by its elongated central tail-feathers and its crest. It has most of the habits of the Titmice, frequently hanging head downward or clinging against the bark of a tree while hammering its bill into the crevices. I do not remember ever to have seen one on the ground. It was quite common about Concepcion, both in summer and winter. A nest found November 6 was built among the thorny twigs of a low mimosa at a height of about five feet from the ground. It was composed of thorny and other twigs with a few tufts of wool, but without any proper lining. In shape it was a short cylinder, about ten inches high by six in diameter; the entrance a small hole at the top, the nest a spherical cavity at the bottom, the two connected by a spiral passageway less than an inch in diameter, which made only

about one complete turn. It contained two tiny white eggs, which were perfectly fresh. Probably more would have been deposited, as most of the other species lay at least three or four.

83. **Synallaxis albescens** (*Temm.*).—An abundant species in thorny hedges or among the masses of dwarfed and spiny bushes which cling to each other so tenaciously amid the general desolation of the sandy barrens. Its note is almost precisely like the common call note of the Pewee (*Sayornis fuscus*).

The nest varies in shape and detail of construction according to the surroundings. It is commonly placed among the thickest meshes of a thorny thicket, and its body is of the shape of an egg placed with its longer axis vertical and the larger end downward. This is a shell made by weaving and locking together twigs and thorns of various kinds, and is usually completed by the massing of a quantity of decaying twigs of larger size on top—presumably to keep the whole dry. This body of the nest is from eight to twelve inches in height, and the eggs are laid either on the bare twigs at the bottom of the cavity, or more rarely on a loose flooring of wool. Entrance is gained by the bird through a long tube which is built on to the nest at a point about half way up the side. This tube is formed by the interlocking of thorny twigs, and is supported by the branches and twigs about it. It may be straight or curved; its diameter externally varies from two to four inches, and its length from one to two feet. The passageway itself is but just large enough to admit the birds one at a time—and it has always been a mystery to me how a bird the size of a Chipping Sparrow could find its way through one of these slender tubes, bristling with thorns, and along which I found it difficult to pass a smooth slender twig for more than five or six inches. Yet they not only pass in and out easily, but so easily that I was never yet able to surprise one in the nest or to see the slightest disturbance of it by the bird's hurried exit.

The eggs are three or four, light blue, and may be found from October until late in December.

84. **Synallaxis phryganophila** *Vieill.*—Larger than the preceding and less abundant, but found in similar places. The long middle tail feathers, and the black and yellow chin and throat markings distinguish it easily among all its relatives. A nest containing four white eggs, faintly tinted with blue, was found January 26, 1880, in a thorny tree, and some eight feet from the

ground. The nest was quite similar to the one just described, but the cavity in which the eggs were laid was near the *top* of the body of the nest, while the passageway descended from it to the base of the nest, and there becoming external rose gradually to the level of the eggs at a distance of almost three feet.

These two are the only species building these "nests with handles" with which I am acquainted.

85. **Synallaxis striaticeps** *Lafr. et d' Orb.*—Never very abundant, but not uncommon in winter among the thicker trees near the river. It creeps more than the other *Synallaxes*, and in form, color and habits is strikingly like *Lepidocolaptes atripes*—in fact a very good imitation on a small scale. Of nest and eggs I know nothing.

86. **Synallaxis sordida** *Less.* ESPINERO CHICO (LITTLE THORN-BIRD).—One of the commonest species, and found everywhere in low woods or among bushes and cactus plants. The nest, which often contains a peck or more of thorns and twigs, is placed on a bush or low tree, not unfrequently among the bristling stems of the prickly-pear cactus. Its plan is the same as that described under No. 82, but the spiral way leading to the nest cavity is much longer and frequently makes more than one complete turn. The three or four white eggs are laid sometimes as early as October 1, and also as late as December 25. This bird uses rather more wool and other soft substances in its nest-building than any of the species yet described.

87. **Synallaxis sulphurifera** *Burm.*—A single specimen was taken among high grass and sedges on the edge of a bushy swamp at Concepcion, October 2, 1880. Of its habits I know nothing.

88. **Synallaxis maluroides** *d' Orb.*—Found sparingly at Concepcion among reeds and sedges, especially where these grow in water one or two feet deep. Here its harsh, cackling notes frequently seem quite close to you while the utmost patience may not be repaid by a single glimpse of their author. In precisely these localities, and nowhere else, may be found nearly globular nests six or seven inches in diameter formed of grass, reeds, etc., mixed with some mud, but with little in the way of lining. They are bound to the reeds, and each contains early in October three or four clear, pale-blue, unspotted eggs. Although I never saw a bird of any kind enter or leave one of these nests I collected

sufficient circumstantial evidence to implicate the present species in their construction.

89. **Synallaxis hudsoni** *Scl.*.—A strictly terrestrial species which does not occur at all at Concepcion. We first saw it at Azul late in January, 1881. The first individuals seen were flushed from the long, dry grass which grew along the bank of the stream at that place. They rose very much like Pipits, for which I at first mistook them, although their note is quite different. We soon found that they were not confined to the long grass near the stream but were equally plenty in the short grass of the pampas. They were afterward met with in all suitable localities on the pampas, and even on the *meseta* of the Sierra de la Ventana at a height of some 2000 feet above the surrounding plain. I know nothing of the nest, but as the birds are only found on the treeless plains we should expect the nest to resemble somewhat that of the species just described.

90. **Placellodomus sibilatrix** *Döring.*.—An abundant species among the open woods along the Uruguay and hardly distinguishable at ten paces distance from half a dozen others. Its nest, however, is unmistakable. The birds begin by fixing a few crooked and thorny twigs among the terminal sprays of some slender branch which juts out horizontally from a tree, or rises obliquely from near its base, and around these twigs as a nucleus more are gathered, until by the time the nest has reached the proper size its weight has bent the branch so that its tip points directly to the earth. Nests which are thus begun at a distance of fifteen or twenty feet from the ground are often only two or three feet from it when finished, and a thorough soaking by a heavy rain will sometimes weigh them down until they actually touch. They are more or less oval or cylindrical in shape and commonly about two feet long by twelve or fifteen inches in diameter, and contain from a peck to a bushel of twigs and thorns. The nest cavity within is small in proportion to the size of the nest, and occupies its upper part. It is reached by a more or less direct passageway from below, the external opening being very nearly at the lowest part of the nest, though sometimes a little shelf, or even a pocket, is built on to the side, forming a resting place in front of the door.

The nests vary interminably in size and shape, but are pretty constant in the material used—this being almost always irregular

and thorny twigs of various trees growing in the neighborhood, while the interior is formed of less thorny twigs with some wool and hair. Usually, also, if the material be at hand, a quantity of old, dry horse-droppings is placed loosely on top of the nest and gradually becomes felted into it, rendering it more nearly waterproof. In place of this I have frequently found quantities of broken straw, weed-stalks, twigs, grass, and even chips; all doubtless collected from the ridges of drift which the last overflow of the river had left near at hand. So compactly is the whole nest built that it often lasts more than one year, and may sometimes serve the same pair two successive summers. More often, however, a new nest is built directly above the old one, which serves as a foundation, and occasionally as many as three nests may be seen thus on the same branch-tip, two of them at least being occupied. When other branches of the same tree are similarly loaded, and other trees close at hand also bear the same kind of fruit, the result is very picturesque, yet it is so common that it soon ceases to attract attention, and even among the natives the bird has no distinctive name, being called *Espinero chico* (Little Thorn-bird) or *Caserito* (Little House-builder), names applied indiscriminately to half-a-dozen species.

The eggs, which are white, are laid from October 1 to January 1, but many of the birds work at nest-building all winter, sometimes spending months on a single nest.

91. **Placellodomus ruber** (*Vieill.*)—Nearly twice the size of the preceding, which it much resembles in habits and note. The nest is also quite similar, though never pendent in the same degree. Indeed, it is sometimes built into the main fork of a small tree; but this is unusual. It is commonly placed either *in* a clump of bushes, or else on a branch in the same way as with the preceding species, except that the nest does not *nod* so far, the branch rarely bending below the horizontal. The nest is of about the same size and shape, but is thus placed with its longer axis horizontal instead of vertical, and with the entrance at the end as in the other case. There are commonly two cavities in the nest, one being half open to the weather, and forming the entrance, the other further back and connected with the former by only a short passageway, which in many cases is reduced to a simple hole through a broad partition which alone separates them. The nest cavity is thus about on the same level as the entrance,

but the eggs are never visible on looking in at the orifice. The birds nest at about the same time as the preceding, and the eggs are similar but larger.

92. **Anumbius acuticaudatus** Less. ESPINERO (THORN-BIRD).—This well-known bird abounds at Concepcion, as it does almost everywhere in the Argentine Republic, where there are trees or bushes large enough to support its nest. The bird is not larger than our Wood Thrush (*Turdus mustelinus*), but its nest is sometimes four feet in length, with an average diameter of two feet. Probably no nest as first completed would show these dimensions, but as the same nest is used for several seasons in succession its size increases until it may even exceed the above measurements. The bird is rather partial to thinly-wooded districts, and spends more of its time on the ground than do the two preceding species. Like them it builds its nest of twigs and thorns, placing it either on a tree or bush, sometimes low enough to be reached by the hand, sometimes at a height of twenty or thirty feet. The first new nest I ever examined was built in an ombú tree at Buenos Aires and measured about two and one-half feet in height by fifteen inches in diameter.

The longer diameter was vertical and the opening at the top gave access to a passageway, barely large enough to admit the hand, and twisting regularly in a spiral to near the bottom where it enlarged somewhat to form the nest cavity. The spiral passageway made rather more than two complete turns between orifice and nest, and in so doing passed between two branches of the tree so close together as barely to allow the passage of the bird. I have several times seen nests in which these passageways were made to pass completely around the (small) main stems of the trees on which they were built. In other nests the passageway, though never straight, was by no means a spiral, and the longer axis of the nest frequently becomes only slightly raised above the horizontal. Sometimes several nests are joined together and all occupied at the same time, but more often a new nest is to be seen built against an old one, and in the latter a Swallow or other bird will have built its own nest.

Sometimes the four or five white eggs are laid on the bare, clean twigs of the nest; sometimes the whole interior—passage and nest cavity—is well lined with wool and other soft substances. The birds suffer much from both opossums and iguanas, the for-

mer entering by the door, the latter pulling the bottom of the nest out and reaching eggs or young from below. The birds are by no means shy, and when a nest is conveniently situated it is quite easy to catch the bird in the nest after sunset. Fresh eggs may be found from October till January—and the birds spend more or less time in building and repairing nests throughout the entire year.

93. **Homorus lophotus** (*Bon.*). COPETON (BIG-CREST) and CASERO (HOUSE-BUILDER).—The name *Cachalote* assigned by most writers to this bird I have never heard at Concepcion where it is well known by the name *Copeton*. A bird the size of a Blue-jay, with uniform rufous plumage, a respectable crest, an outrageous disposition and voice, and a nest the size of a barrel, is a bird that cannot be overlooked, especially if, as is his custom, he comes attended by a score or so of his immediate relatives and friends.

Like many a more pretentious creature, however, his house is more interesting than himself, and we have only room for a brief glance. His nest is built entirely of sticks, and many of them of goodly size, frequently as large around as your little finger and two feet or more long. These are disposed in such a way as to form a structure three or four feet in length by about two in breadth at the widest part, the whole very much resembling a gigantic powder-flask lying on its side among the lower branches of a spreading tree. It is quite loosely built and the nest cavity is rather indefinite, being any portion of the floor of the nest which the bird selects for the reception of the eggs. These are usually three or four in number, pure white, and are laid from October until January. They can usually be counted through the loose floor of the nest, though sometimes its thickness prevents this. The birds stick closely to the thickest and thorniest trees, and I do not remember ever to have seen one on the ground. Their voices are harsh and discordant in the extreme, and except for their large and curious nests the birds would have little interest even for the collector.

(*To be continued.*)

ON A BIRD NEW TO NORTHERN NORTH AMERICA.

BY C. HART MERRIAM, M. D.

Among some birds sent me by Mr. Napoleon A. Comeau from Godbout, Province of Quebec, Canada, is a specimen of the Yellow-green Vireo (*Vireo flaviviridis* Cassin). Mr. Comeau writes me that he found it, dead, near his home at Godbout, May 13, 1883. The specimen agrees well with Baird, Brewer and Ridgway's description of this species except in size, it being considerably smaller than the measurements there given. Its measurements are: wing, 72 mm. (2.83 in.); tail, 48 mm. (1.88 in.); bill, 10 mm. (.40 in.); while Baird, Brewer and Ridgway, in their diagnosis (Hist. N. Am. Birds, I, p. 359), give: wing, 3.15 in.; tail, 2.55 in.; and bill, .41 in. The wing formula in the Godbout specimen is as follows: 2d and 3d primaries subequal; 4th shorter; 1st between 4th and 5th, but much nearer 4th ($2 = 3, 4, 1, 5$). The sides of the breast, axillars, and particularly the crissum, are of a bright sulphur yellow, much more brilliant than in the brightest fall specimens of *V. olivaceus*.

Mr. Robert Ridgway of the Smithsonian Institution, to whom I submitted the specimen, writes as follows concerning it: "The Vireo sent for examination seems to be true *V. flaviviridis* but is unusually small for that species, the smallest example in our series of fourteen skins having the wing 2.90 inches long, the average being a little more than 3 inches."

The northernmost record of *V. flaviviridis* that I have been able to find is that of a specimen procured at Fort Brown, Texas, August 23, 1877, by Dr. James C. Merrill, U. S. A. (Proc. U. S. Nat. Mus., Vol. I, p. 125, 1878).

The route by which this little waif reached the Gulf of St. Lawrence is open to conjecture. My opinion is that it was carried to sea in a storm, and, chancing to fall in with a northward bound vessel, remained about the rigging till within sight of land; and were the vessel bound for Quebec the first land neared would probably have been Point de Monts, only nine miles from the spot where it was picked up, emaciated and dead.

ON AN APPARENTLY NEW GULL FROM
EASTERN NORTH AMERICA.

BY WILLIAM BREWSTER.

In a recent issue of this Bulletin* I recorded a supposed specimen of *Larus glaucescens*, from the Bay of Fundy, and Mr. Merrill, on the same page, announced another captured near Grand Menan. At that time neither bird had been compared with typical specimens of *glaucescens*, but both agreed so well with descriptions, especially in the peculiar "washed out" appearance of the primaries (a character said to be diagnostic of *glaucescens*) that there seemed to be no reason for doubting that they really belonged to that species. Moreover, there was nothing at all improbable in the occurrence of *glaucescens* on the coast of New England, for Kumlien had reported it as breeding at Cumberland Sound,† whence it would be likely to follow the Atlantic Coast in its migrations southward. At least so I reasoned at the time, but, as will presently appear, there was more than one hidden flaw in the evidence upon which my conclusions were based.

Shortly after the publication of the notes above mentioned, Mr. Merrill was kind enough to send me his specimen for examination, and at about the same time another, of which I had not previously known, was received from Mr. Everett Smith. Finding that both were similar to Mr. Welch's bird (the Bay of Fundy specimen), and that all three had certain peculiarities not ascribed to *glaucescens*, I determined to investigate the matter further and to this end applied to the National Museum for the loan of an adequate series. Through Professor Baird's and Mr. Ridgway's kindness this series was promptly forwarded, and is now before me. It includes several typical *glaucescens*, both adult and immature; one of Kumlien's supposed *glaucescens* from Cumberland Sound (the only one brought back by him, or at least in the National Collection, I understand); and some examples of *L. leucopterus*. In addition to these specimens I have been able to

* Vol. VIII, No. 2, April, 1883, p. 125.

† Contrib. to Nat. Hist. Arc. Am., pp. 98, 99.

bring together from other sources a number of examples of *L. glaucus* and *L. leucopterus*, and two more *L. glaucescens*.

A critical study of this material has resulted in the following conclusions: (1) That the Gulls from Grand Menan and the Bay of Fundy are identical with the Cumberland Sound specimens. (2) That they represent a form distinct from *L. glaucescens*. (3) That this form is not referable to any species or variety now recognized by the best authorities on *Laridæ*.

Before going further it is necessary to revert to a Gull which has given systematists no little trouble; this is *Larus chalcopterus*. The name was instituted* by Lichtenstein in 1854, without accompanying characterization. In the following year Bruch identified with it a Gull of which he gives the following brief description: † "Wholly similar to the preceding [i. e. *L. leucopterus*] except in the primaries, which are ash-gray with round white terminal spots. The young plumage, as with *L. glaucopterus* [= *L. glaucescens*], is dark gray. Habitat, American Coast of Behring's Straits and Greenland."

This description, as far as it goes, agrees well with the bird which we are about to consider, but let us trace the history of *chalcopterus* a little further.

It was admitted as a valid species by Lawrence in 1858,‡ and similarly acknowledged by Coues in 1862,§ but the latter author has recently united it with *L. glaucescens*,|| remarking that "there is not the slightest likelihood that it is anything more than *glaucescens*; probably in somewhat immature condition."

Neither Lawrence nor Coues claimed to have seen specimens of *chalcopterus*, but Saunders has been more fortunate. He examined Lichtenstein's type, which turned out to be merely an example of *L. leucopterus*. Concerning Bruch's bird he was evidently in doubt, for a ? is prefixed to the reference which is given among the synonyms of *leucopterus*; while the *chalcopterus* of Lawrence and Coues is placed under *glaucescens*.¶

The gist of all this seems to be that the original *Larus chalcopterus* was simply *L. leucopterus*. As to Bruch's *chalcopterus*

* Nomencl. Av. Mus. Berol., p. 99, 1854.

† J. f. Orn., 1855, p. 282.

‡ B. N. A., 1858, p. 843.

§ Proc. Phila. Acad., 1862, p. 235.

|| Birds N. W., pp. 622, 624.]

¶ Proc. Zool. Soc. of London, Feb. 5, 1878, pp. 166, 167.

we can at present only speculate, although there are some reasons for believing that it was the same with the bird which Kumlien found at Cumberland Sound. But in view of the uncertainty connected with this point it seems better to re-name the bird, which I do as follows:

Larus kumlieni sp. nov. LESSER GLAUCOUS-WINGED GULL.

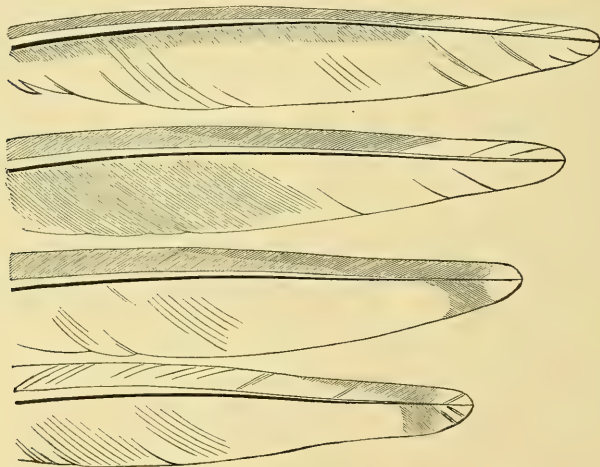
♀ *Laroides chalcopterus*, BRUCH, J. f. Orn., 1855, p. 22 (nec Licht.).

♀ *Larus chalcopterus*, LAWRE, B. N. A., 1858, p. 843; COUES, Proc. Philad. Acad., 1862, p. 295.

Larus glaucescens, KUMLIEN, Contrib. to Nat. Hist. Arc. Am., pp. 98, 99; BREWSTER, Bull. N. O. C., Vol. VIII, No. 2, p. 125; MERRILL, *loc. cit.*

CH. SP.—*Similis L. glaucescenti*, sed minor; magis candidus; pennis candidioribus; colore atro in remigibus angustiore ac magis distincto a partibus candidioribus.

♂, *adult, breeding plumage* (No. 76,225, Coll. Nat. Mus., Cumberland Sound, Arctic America, June 14, 1878. L. Kumlien). Bill short, stout, and comparatively straight, the convexity of the upper mandible slight and the angle of the lower mandible not strongly marked. First primary*



longest. Tarsus about equal to middle toe and claw. Head, neck, tail, and entire under parts snowy-white; mantle pale pearl-blue, much lighter than in *argentatus* and *glaucescens*, about as in *leucopterus*. Primaries

* I am indebted to Mr. Ridgway for the drawing from which the accompanying illustration was made.

and secondaries mostly white on their exposed surfaces, with markings of dull slate-gray. Primaries: *First*, snow white on both webs for a terminal space of about two inches, and white to its base on the inner web, except next the shaft; outer web (except terminally) slate-gray, shading insensibly into white near the base of the feather and bordered by a stripe of about its own width, but of a lighter shade, on the inner web next the shaft, which is strongly tinged with the same color. *Second*, with the gray confined to a space of about four inches on the outer web, where it touches the shaft for a distance of scarcely more than an inch, receding from it very gradually towards the base, abruptly in the other direction, at both ends tapering to a point on the margin of the feather; the base of this primary is tinged on both webs with the color of the mantle, which, on the inner web, fades imperceptibly into white about three inches from the tip, but on the outer is deepest at the point of junction with the gray stripe, where the line of demarkation is nevertheless perfectly distinct; there is also an indication of a sub-terminal bar in a transverse spot of dusky on the inner web about half-an-inch from the tip. *Third*, with the gray occupying the entire outer web for a space of rather more than two inches at its basal end, tapering gradually away from the shaft, as in the second primary, but at the other extremity crossing the inner web of the feather and forming a well-defined and continuous sub-terminal bar of about half-an-inch in width, which confines the white to a rounded terminal spot and a short space on the inner web, the remainder of the feather being tinged with the color of the mantle. *Fourth*, with the slate paler and more restricted but still forming a perfect sub-terminal bar. *Fifth*, with the gray confined to two transverse sub-terminal spots on the opposite edges of the feather and separated by a wide space of white next the shaft; this feather is otherwise similar to the remaining primaries, which, with all the secondaries, are perfectly plain and concolor with the back to within about two inches of their tips where their pearly-blue color changes rather abruptly into pure white.

"Iris cream-color; bill yellow with vermilion spot on lower mandible; orbital ring reddish-purple; legs and feet flesh-color" (mem. on label).

Dimensions. "Length 24.00"; wing, 16.25; culmen (chord from feathers), 1.75; bill from nostril, .85; do. from gape, 2.60; height at anterior end of nostril, .65; height at angle, .61; tarsus, 2.35; middle toe and claw, 2.27; tail, 6.65.

Habitat. Cumberland Sound (Kumlien) and Greenland? (Bruch), migrating south in winter to the Bay of Fundy and Grand Menan.

The following measurements are of Mr. Merrill's, Mr. Smith's, and Mr. Welch's specimens, respectively: ♂, adult (winter pl.). Grand Menan, N. B., Jan. 21, 1883. Length, "23.75"; wing, 17.00; culmen, 1.85; bill from nostril, .89; gape, 2.75; height at nostril, .65; do. at angle, .65; tarsus, 2.30; middle toe and claw, 2.28; tail, 7.22.

Immature, sex? Bay of Fundy, Feb., 1883. "Length, 23.50; extent 50.00"; wing, 15.50; culmen, 1.65; bill from nostril, .89; gape, 2.50;

height at nostril, .56; do. at angle, .60; tarsus, 2.10; middle toe and claw, 2.15; tail, 6.90.

Adult, sex? Bay of Fundy. Wing, 16.00; culmen, 1.88; bill from nostril, .88; gape, 2.75; height at nostril, .66; do. at angle, .66; tarsus, 2.25; middle toe and claw, 2.30; tail, 6.50.

The chief characters which distinguish *L. kumlieni* from *L. glaucescens* are as follows: *Smaller size; a lighter mantle; and very different color and pattern of the primaries.* The primaries of *glaucescens* are essentially concolor with the mantle, and this coloring—uniform nearly to the tips of the feathers, where it changes abruptly into white—gives the folded wing a generally dark appearance relieved only by the rounded white apical spots which are conspicuous on all the feathers. In *kumlieni*, on the contrary, the general effect of the wing is white, the pale pearly-blue of the mantle, although present on some of the feathers, being mostly concealed, and the "pattern" produced by markings many shades darker than any color found elsewhere on the bird; while, owing to the general extension of white, there are usually only two or three primaries which have well-defined apical spots.*

These characteristics are pretty uniformly maintained among the four specimens before me, but there is some individual as well as seasonal variation. Thus Mr. Merrill's bird differs from the type in having a more decided approach to a sub-terminal bar on the second primary, where a transverse spot of gray on the inner web is continued across to the shaft but fails to connect with a smaller corresponding spot on the edge of the outer web. It also has a dusky spot in front of the eye and some obscure mottling on the crown and nape—probably seasonal (winter) characteristics.

Mr. Smith's specimen is evidently immature. Its entire head and neck, and even the breast, are mottled with dusky, and the bill is greenish at the base. The mantle, however, is perfectly pure and the wings show no traces of immaturity. The bill is much weaker and more depressed than in the other examples. The pattern of the primaries is essentially the same, but there is a greater extension of the gray, especially on the first two

* These differences, of course, will only serve to distinguish adults. I have not seen the young of *kumlieni*, but Kumlien states that it is "even darker than the young of *L. argentatus*, the primaries and tail being *very nearly black*." If this be true it can be readily separated from young *glaucescens*, which is much *lighter* than *argentatus*.

feathers, where it occupies a longer space on the outer webs, and on the second primary forms a complete sub-terminal bar.

In Mr. Welch's example the fifth as well as the second primary has a perfect sub-terminal bar, and the sixth shows an interrupted one; while the slate spreads over the greater part of the webs of the first three feathers, except terminally. This extension of the dark color restricts the white spaces at the ends of the second, third, fourth and fifth primaries to rounded apical spots which resemble those of *glaucescens*. There is a further approach to *glaucescens* in the unusually deep shade of the mantle and the bluish cast of many of the light areas on the primaries, but the mantle is still much lighter than in any specimen of *glaucescens* which I have seen.

In many respects *L. kumlieni* bears a curiously close resemblance to *L. leucopterus*. It is of about the same size and proportions, and the shape of the bill is similar, while several of the specimens before me are positively identical in general coloring. The only tangible point of difference seems to be that of the peculiar wing-markings of *kumlieni*. This, of course, is conclusive, but it is a matter of opinion whether it indicates a stronger affinity with *glaucescens*. Welch's bird certainly approaches *glaucescens*, and a large series may establish a complete intergradation; but, on the other hand, my light extreme (the type) suggests a similar transition into *leucopterus*. Were it not for obvious considerations I should suspect that the bird might be a hybrid between *glaucescens* and *leucopterus*. This, however, is highly improbable, and the most rational conclusion seems to be that it is a distinct species, intermediate between *leucopterus* and *glaucescens*, but on the whole perhaps more nearly allied to the latter, to which it bears about the same relation that *leucopterus* does to *glaucus*. All four species are evidently very closely related and form a group of high northern distribution. The range of *kumlieni* can be only conjectured at present, but the evidence indicates that it is probably confined to the eastern, and perhaps also northern, shores of the continent, where it replaces true *glaucescens*, which must be once more restricted to Pacific waters. Now that three examples are known to have been taken near the eastern corner of New England, it should be carefully sought all along our seaboard, for it doubtless occurs there with some regularity in winter, at least during severe seasons.

BREEDING OF THE HARLEQUIN DUCK (*HISTRIONICUS MINUTUS*).

BY C. HART MERRIAM, M. D.

The Harlequin Duck is an inhabitant of the southern part of the circumpolar zone which Mr. J. A. Allen, in his admirable paper upon the Geographical Distribution of Animals, has designated the "Arctic Realm"; and is also found in some parts of the "Boreal Province" of the "North-Temperate Realm." At the commencement of the breeding season it retires from the sea-coast to the lakes and rivers of the interior, to return again with its young in autumn, whence, keeping the salt water, it migrates southward a sufficient distance to escape the masses of drifting ice that harass the ragged shores of the North during the winter.

In Siberia it is known to breed about Lake Baikal and in the Bureja Mountains (Radde); in Mantchuria and at various points in the great Stanowoi Range (Von Middendorff); about the Upper Amoor (Von Schrenck); and in Kamtchatka. On the American Continent it has been found breeding along the tributaries of the Yukon in Alaska (Dall); in the interior of the Fur Countries and about Hudson's Bay (Richardson); on the fresh water ponds of Labrador (Audubon); and in the Rocky Mountains within the limits of the United States (in Montana, Coues). It also nests in Newfoundland, Greenland, and Iceland (Kruper).

The accounts of the breeding habits of this species are extremely meagre, but all agree in placing its nest upon the ground, and usually in close proximity to swiftly-running water.

While in Newfoundland last winter I learned that these birds, which are here called "Lords and Ladies," are common summer residents on the Island, breeding along the little-frequented water-courses of the interior. I was also informed, by many different people, that their nests were built in *hollow trees*, like the Wood Duck's with us. Mr. James P. Howley, Geologist of Newfoundland, has favored me with the following response to a letter addressed to him on this subject:

"I received your note enquiring about the Harlequin Duck, but delayed answering it till the arrival of one of our Indians. . . . It is quite true the birds nest in hollow stumps of trees, usually on islets in the lakes or tarns of the interior. They usually frequent the larger lakes and rivers far from the sea-coast, but are also found scattered all over the country."

THE AMERICAN ORNITHOLOGISTS' UNION.

On September 26, a convention of American ornithologists met in the library of the American Museum of Natural History in New York, to organize an AMERICAN ORNITHOLOGISTS' UNION, pursuant to the following call:—

CAMBRIDGE AND WASHINGTON,
AUGUST 1, 1883.

To ——— ———

DEAR SIR:—

You are cordially invited to attend a Convention of *American Ornithologists*, to be held in New York City, beginning on September 26, 1883, for the purpose of founding an AMERICAN ORNITHOLOGISTS' UNION, upon a basis similar to that of the "British Ornithologists' Union." The place of meeting will be announced hereafter.

The object of the UNION will be the promotion of social and scientific intercourse between American ornithologists, and their co-operation in whatever may tend to the advancement of Ornithology in North America.

A special object, which it is expected will at once engage the attention of the UNION, will be the revision of the current lists of North American Birds, to the end of adopting a uniform system of classification and nomenclature, based on the views of a majority of the UNION, and carrying the authority of the UNION. Other important matters will be doubtless presented for consideration at the first meeting.

It is proposed to hold meetings at least once annually, at such times and places as may be hereafter determined, for the reading of papers, the discussion of such matters as may be brought before the UNION, and the transaction of the usual business of a scientific society.

Those who attend the first meeting will be considered *ipso facto* Founders of the AMERICAN ORNITHOLOGISTS' UNION. Active and Corresponding Members may be elected in due course after organization of the UNION, under such rules as may be established for increase of membership. Details of organization will be considered at the first meeting.

Should you favor this proposition, and propose to attend the first meeting, please so signify to any one of the undersigned.

J. A. ALLEN, Cambridge, Mass.,
Editor of the Nuttall Bulletin.

ELLIOTT COUES, Washington, D. C.,
Assoc. Editor of the Nuttall Bulletin.

WILLIAM BREWSTER, Cambridge, Mass.,
President of the Nuttall Club.

This call was sent to a little less than fifty of the more prominent ornithologists of the United States and Canada, selected mainly in reference to their scientific standing, but somewhat with regard to geographical representation, it being desirable to make the gathering as catholic and non-sectional as possible. Of the forty-eight persons invited all but fourteen responded, in each case warmly favoring the project; there is reason to believe that in a large part of the remaining instances the persons invited failed, through absence from home or other cause, to receive the call. Twenty-five of those heard from expressed their intention to attend the convention, and twenty-one were actually present. Following is a list of those in attendance, with the states whence they came: Hon. Chas. Aldrich, Iowa; H. B. Bailey, E. P. Bicknell, D. G. Elliot, Dr. A. K. Fisher, Dr. J. B. Holder, Dr. E. A. Mearns, and Dr. C. H. Merriam, New York; C. F. Batchelder, W. Brewster, C. B. Cory, and H. A. Purdie, Massachusetts; Capt. C. E. Bendire, U. S. A., Oregon; N. C. Brown, Maine; M. Chamberlain, New Brunswick; Dr. E. Coues, Dr. D. W. Prentiss, and R. Ridgway, District of Columbia; T. McIlwraith, Canada; Dr. R. W. Shufeldt, U. S. A., Louisiana; Dr. J. M. Wheaton, Ohio.

The meeting was called to order by Mr. Brewster, and Dr. Coues and Mr. Bicknell were respectively elected temporary Chairman and Secretary. The original call for the Convention was then read, and also the list of persons to whom invitations had been sent, twenty-one of whom were present and responded. On motion of Dr. Merriam a resolution was adopted to the effect: That those who attended the convention be declared Founders of the American Ornithologists' Union, and that this Union be declared to be hereby founded. A communication was then read by the Chair from Professor Baird, expressing his hearty concurrence in the objects of the Convention, and his regret at being unable to be present. The Chair then referred to the eminent standing as naturalists of both Prof. Baird and Mr. Allen, and urged, notwithstanding their enforced absence—the one by pressing official duties, the other by physical disability—that these gentlemen, in view of their connection with the initial steps of organization, be enrolled among the Founders, raising the number of Founders to twenty-three. A motion to this effect was unanimously carried.

A provisional draft of a constitution was presented by the Chair and read by the Secretary. On motion of Mr. Brewster, it was re-read, discussed, voted upon section by section, and finally adopted as a whole. Subsequently one of the articles was reconsidered and modified. As finally adopted, its leading provisions are as follows: Members are divided into four classes: (1) Active, limited to fifty in number, and to be residents of the United States or Canada. (2) Foreign, limited to twenty-five, and to be non-residents of the United States or Canada. (3) Corresponding, eligible from any country, and limited to one hundred. (4) Associate, to be unlimited in number, and residents of the United States or Canada. Eligibility to office and the right to vote are restricted to Active Members, whose annual dues are fixed at \$5.00. Foreign and Corresponding Members are enrolled upon signifying acceptance of membership. Members of all classes are entitled to present papers and take part in scientific discussions.

The officers of the Union consist of a President, two Vice-Presidents, a Secretary and Treasurer (combined in one officer), and five Councillors, who together form a Council. These officers are to be elected annually at the stated meetings of the Union. Stated meetings are to be held each year at such times and places as the Union may determine. Special meetings may be called by the Council as occasion may require. There is also a provision authorizing the Council to issue publications.

Following the adoption of the constitution, an election was held for Active, Foreign, Corresponding and Associate Members, and for officers for the ensuing year. To the list of Active Members, represented by the Founders, were added: W. B. Barrows, G. B. Grinnell, and J. H. Sage, Connecticut; Prof. F. E. L. Beal, Iowa; L. Belding and Dr. J. G. Cooper, California; R. Deane, and Prof. S. A. Forbes, Illinois; Col. N. S. Goss, Kansas; Prof. T. N. Gill, H. W. Henshaw and Dr. J. H. Kidder, U. S. N., District of Columbia; J. A. Jeffries, Massachusetts; Prof. F. H. King, Wisconsin; Dr. F. W. Langdon, Ohio; G. N. Lawrence, and N. T. Lawrence, New York; Dr. J. C. Merrill, U. S. A., Montana; Dr. H. Nehrling, Missouri; E. W. Nelson, Colorado; T. S. Roberts, Minnesota; W. E. D. Scott, Arizona; Hon. G. B. Sennett, Pennsylvania, and W. E. Saunders, Canada. The number of Active Members was thereby raised to forty-seven.

The election for officers resulted as follows: President, J. A. Allen; Vice-Presidents, Dr. Elliott Coues and Robert Ridgway; Secretary and Treasurer, Dr. C. Hart Merriam; Councillors, Prof. S. F. Baird, G. N. Lawrence, William Brewster, H. W. Henshaw, and Montague Chamberlain.

The election of Foreign Members resulted in the choice of the following twenty-one scientists of eminence in Ornithology: Prof. J. V. Barboza du Bocage, Lisbon; Dr. Jean Cabanis, Berlin; Mr. Henry E. Dresser, London; Dr. Otto Finsch, Bremen; Dr. H. H. Giglioli, Florence; Dr. John Gundlach, Cuba; Mr. John Henry Gurney, Sr., Norwich, England; Dr. Gustav Hartlaub, Bremen; Mr. Allan O. Hume, Calcutta; Prof. Thomas Henry Huxley, London; Dr. Ferdinand Krauss, Stuttgart; Prof. Alphonse Milne-Edwards, Paris; Prof. Alfred Newton, Cambridge, England; Prof. William Kitchen Parker, London; August von Pelzeln, Vienna; Count Tommaso Salvadori, Turin; Mr. Osbert Salvin, London; Dr. Hermann Schlegel, Leyden; Dr. Philip Lutley Sclater, London; Mr. R. B. Sharpe, London; Mr. Alfred Russell Wallace, London.

The following twenty Corresponding Members were elected, further elections in this class being deferred: Count Hans von Berlepsch, Hesse, Germany; Capt. Thomas Blakiston, Hakodadi, Japan; Mr. Walter Buller, Wellington, New Zealand; Mr. Robert Collett, Christiania, Norway; Mr. J. J. Dalgleish, Edinburgh; M. le Père Armand David, Paris; Mr. Percy Evans Freke, Dundrum, Ireland; Mr. F. DuCane Godman, London; M. Alfred Grandidier, Paris; Mr. John Henry Gurney, Jr., Norwich, England; Mr. J. Edmund Harting, London; Mr. J. A. Harvie-Brown, Larbert, Scotland; Mr. J. Douglas Ogilby, Ireland; M. Emile Oustalet, Paris; Prof. J. A. Palmèn; Mr. Harry Pryer, Yokohama, Japan; Mr. Howard Saunders, London; Mr. Henry Seebohm, London; Mr. Leonhard Stejneger, Alaska; Mr. Henry T. Wharton, London.

Eighty-seven ornithologists of the United States and Canada were elected Associate Members.

During the session of the Convention, aside from the work of organization and elections, committees were appointed by the Chair to take in hand the consideration of various important subjects, and to present reports upon them at the next annual meeting. The most important of these—"A Revision of the Classification

and Nomenclature of North American Birds"—was referred to a committee of five, consisting of Messrs. Coues, Allen, Ridgway, Brewster, and Henshaw. A committee was also appointed on the "Migration of Birds," to coöperate with Mr. W. W. Cooke in connection with his work on this subject in the Mississippi Valley, and consists of the following gentlemen, with power to add to their number: Merriam, Brown, Purdie, Wheaton, Chamberlain, Grinnell, Henshaw, Cory, Merrill, Fisher, Bicknell, Mearns, and McIlwraith. A committee on "Avian Anatomy" consists of Shufeldt, Coues, Jeffries, and Merriam; another on "Oölogy," of Bendire, Bailey, Brewster, Ridgway, and Merrill. A committee was also appointed "to investigate the eligibility or ineligibility of the European House Sparrow in America," consisting of Holder, Purdie, Chamberlain, Brown, and Bicknell, with power to increase its membership at its discretion. Finally, a sixth committee was appointed to consider the subject of "Faunal Areas," on which were placed Allen, Ridgway, Bicknell, Merriam, Fisher, and Mearns.

Resolutions of thanks were tendered to the Trustees of the American Museum of Natural History, for use of rooms during the session of the Union and for other favors so courteously rendered; to Prof. A. S. Bickmore and Dr. J. B. Holder for many kind attentions personally rendered to the members; and to Mr. E. P. Bicknell for his services on the "Committee of Arrangements" for the meeting, and for the promptness and thoroughness with which he executed the duties of this position. A resolution of thanks was also tendered the signers of the call, in their capacity as a "Committee of Organization," for their zeal and efficiency in issuing the call for the meeting, as well as for the thorough and systematic preparation they were able to make for the speedy and satisfactory transaction of the business incident to the organization of the Union.

The session of the Convention occupied three days, and was marked throughout with the utmost harmony; at adjournment (subject to the call of the Council), hearty expressions of satisfaction with the results of the session were heard from all who had shared in its deliberations. The general good feeling rose to a degree of enthusiasm auguring well for the future work and prosperity of the Union, the organization of which, under such auspicious circumstances, cannot fail to mark an important era in the progress of ornithology in America.

As already stated, the matter of publications was placed in the hands of the Council, by which body the subject was duly weighed after the adjournment of the Union. Naturally the question of an organ, in the form of a serial publication, was the first to present itself, and the impression was general that such a publication must prove indispensable to the work of the Union. It was accordingly voted to establish such a journal, its publication to begin January, 1884. Mr. Allen was chosen editor, to be assisted by a staff of associate-editors, likewise selected by the Council, who are collectively to decide the character of the periodical, and to whom will be intrusted its management.

It may be further announced in the present connection that upon this action being known, it became a question with the members of the Nuttall Ornithological Club whether the Nuttall Club should continue to publish an organ, which, under the new conditions, could only be a rival of that of the Union. The two organizations being virtually one in interest and purpose,—the later being to some extent an outgrowth of the earlier,—and necessarily identical in membership in so far as can be the case where a greater includes a lesser, the Nuttall Club, at a meeting held October 1, voted to discontinue its *Bulletin* with the close of the present volume, and to offer to the American Ornithologists' Union its good will and subscription list,—to place the *Bulletin* in the hands of the Council of the Union with its traditions and prestige, with the tacit understanding that the new serial of the Union shall be ostensibly a *second series* of the Nuttall *Bulletin*. It is therefore to be hoped and expected that the many friends of the *Bulletin* who have hitherto given it such hearty support will extend their allegiance to the new publication of the Union, freely contribute their observations to its pages, and use their influence to extend its usefulness.

Recent Literature.

GOSS'S BIRDS OF KANSAS.*—As is doubtless well-known to most of the readers of the Bulletin, Colonel Goss recently gave to the State of Kansas his large collection of mounted birds, including not only those of the State, but many obtained on various distant expeditions, including visits to Labrador, the Pacific coast, Mexico, and Central America; and he has now very appropriately supplemented his gift by a carefully annotated list of the birds of the State, prepared at the request and under the direction of the State Executive Council. His twenty-six years' residence in Kansas, and his well-known abilities as an ornithologist, give him an unusual fitness for the work, and the expectation these facts naturally inspire of a thoroughly trustworthy list from his hands is fully supported by an examination of the list itself. His commendable conservatism in the matter has led him to exclude a few species previously given as birds of Kansas, the evidence on which they were included not proving to him satisfactory. The extent of his field work may be inferred from the fact that very few species are given on other authority than his own observations, and in these cases he has thoroughly satisfied himself of the correctness of their inclusion. Under these restrictions the list includes 320 species and races, 161 of which are marked as known to breed. The annotations are brief but pertinent, distinguishing carefully the manner of occurrence in the State, but without indicating dates of arrival and departure of the migrants. While we notice a few typographical errors (corrected by an *errata*-slip subsequently issued), the list as a whole is neatly and carefully printed, and attains in general a high grade of excellence. It closes with a supplementary list of 29 species of "Birds to be looked for in Kansas." Doubtless, all of these, and probably others, will ere long be detected; indeed we are surprised that a few of those here given have not already been met with.† The large number of species ultimately to be found (probably not less than 350) in Kansas naturally results not less from its great area (extending as it does through over 400 miles of longitude), than from its having in its eastern third the characteristic birds of the East, while its western half includes those of the Great Plains.—J. A. A.

BECKHAM'S BIRDS OF NELSON COUNTY, KENTUCKY.‡—Mr. Beckham's

*A Catalogue of the Birds of Kansas. By N. S. Goss. Published under the direction of the Executive Council. Topeka, Kansas: Kansas Publishing House, 1883. 8vo, pp. iv+34.

† Since the above was written a letter from Col. Goss calls our attention to the fact of his accidental omission from the list of *Icteria virens longicaudata*, recorded by Prof. Snow as taken on the Smoky-hill River in Western Kansas, this variety appearing in his enumeration of birds to be looked for.

‡ A List of the Birds of Bardstown, Nelson County, Kentucky. By Charles Wickliffe Beckham. Journ. Cincinnati Soc. Nat. Hist., Vol. VI, pp. 136-147, July, 1883.

List is the first paper on the birds of Kentucky, as such, which has yet appeared, and relating mainly to the birds of the immediate vicinity of Bardstown, and thus to a limited locality, is one of especial interest, although incomplete. Says the author, "The list represents hardly two-thirds of the birds that are doubtless to be found here, but it is thoroughly trustworthy as far as it goes; for no species has been admitted on any but the best of evidence: out of the one hundred and sixty-seven enumerated, the writer is himself responsible for all but eight of them." It is based on observations covering "parts of five years." The list is briefly annotated, and the species known to breed, and also those inferred to do so, are specially distinguished. The list is well printed, and evidently carefully prepared. There is one feature, however, liable to mislead one not familiar with the usual range of a few of the spring and fall migrants, the language used, literally taken, implying that they are summer residents. For example, *Dendroica maculosa*, *D. caerulescens*, etc., are spoken of as migrants, arriving in May and departing in October, whereas, of course, they depart as well as arrive in May, and again in autumn, spending the summer far to the northward of the locality in consideration. Such slips, however, will not seriously impair the value of the list to those who are able to supply, from their general knowledge of the subject, the proper correction.—J. A. A.

NUTTING AND RIDGWAY ON COSTA RICAN BIRDS.—This report* on a collection of 97 species made at La Palma, on the Gulf of Nicoya, contains interesting field notes by the collector, Mr. Nutting, and various critical and technical notes by Mr. Ridgway, who is also responsible for the identification of the species and the nomenclature adopted. Trinomial designations are frequently employed. The new species and varieties are *Icterus pectoralis espinachi* (Nutting Ms.), and *Myiarchus nuttingi* Ridg. The generic name *Antenor* (preoccupied in conchology) is replaced by *Parabuteo* Ridg. Pages 387–389 contain a revision of the black-capped *Poliophtila* of Central and South America by Mr. Ridgway. In the introductory pages is a short account of the mammals of the district investigated.—J. A. A.

MIGRATION OF BIRDS.†—The migration of birds is of late attracting

* On a Collection of Birds from the Hacienda "La Palma," Gulf of Nicoya, Costa Rica, By C. C. Nutting. With Critical Notes by R. Ridgway. Proc. U.S. Nat. Mus., 1882, pp. 382–409. Sept. 12, 1882.

† 1. Report on the Migration of Birds in the Spring and Autumn of 1880. By John A. Harvie Brown, F. L. S., F. Z. S., John Cordeaux and Philip Kermode. London: W. S. Sonnenschein & Allen, 15, Paternoster Square. 1881. 8vo, pp. 120.

2. Report of the Committee, consisting of Mr. J. A. Harvie Brown, Mr. John Cordeaux, and Professor Newton, appointed at Swansea 'for the purpose of obtaining (with the consent of the Master and Brethren of the Trinity House, and of the Commissioners of Northern Lights) observations on the Migration of Birds at Lighthouses and Lightships, and of reporting on the same, at York, in 1881.' London: Printed

much attention, not only in Great Britain, but on the continent, and to some extent in this country. It is not only one of the subjects assigned by the British Association for the Advancement of Science to a committee for investigation, with an appropriation of money for carrying on the work, but concerted action has been taken in the matter by the ornithologists of Germany and Austria. Some of the earlier reports on the migration of birds in the British Islands have been already noticed in these pages (Vol. V, pp. 175-177; Vol. VI, p. 174), and we have now to call attention to several late reports and papers on the same subject. The report for 1880 forms a pamphlet of 120 octavo pages. As in the previous year, printed schedules and letters of instruction were sent to 39 stations (lighthouses and lightships) on the east coast of Scotland, the Shetland and Orkney Islands, etc.; to 44 on the east coast of England; to 38 on the west coast of Scotland and the Isles; and to 39 on the west coast of England, or to 160 stations in all, from 106 of which reports were received. Each district is separately treated, embracing preliminary remarks and lists of stations for each, followed in each case by separate reports for each species observed, and by a summary of results. The report for 1881 is of similar scope and character.

As a rule, it is found that the young of the year, in nearly all species, migrate some weeks in advance of the old birds. In spring the migration is, with rare exceptions, performed at night, by easy stages, with none of the great "waves" or "rushes" that are so characteristic of the autumn migration. The birds also appear to fly higher, and, the nights being clearer and shorter, they do not so frequently come in collision with the lanterns of lighthouses and lightships. These collisions also occur between 11 P.M. and dawn of day, instead of in the early hours of night, as is the case in autumn. It is found that in general it is the brightest, whitest, fixed lights—those which can be seen farthest in fog or haze—which attract the most birds. While the data thus far collected are stated to be insufficient to afford any positive conclusions as to the *how* and *why*, the reports contain much interesting matter bearing on the general subject.

The fifth annual report of the German observers, for the year 1880,* comprising nearly one hundred pages, is presented in the form of an annotated list of 280 species, compiled from the reports of the various observers by Dr. R. Blasius, A. Müller, and J. Rohweder. The notes relate to the nesting of many of the species, as well as to their migrations. The

by Spottiswoode and Co., New-Street Square and Parliament Street. [1882.] 8vo, pp. 8.

3. Report on the Migration of Birds in the Autumn of 1881. By John A. Harvie Brown, Mr. John Cordeaux, Mr. Philip M. C. Kermode, Mr. R. M. Barrington, and Mr. A. G. More. London: Printed by West, Newman & Co., 54, Halton Garden. 1882, 8vo. pp. 101.

4. Paper on the Migration of Birds upon our British Coasts, read before the Stirling Field Club, on Tuesday, 13th December, 1881, by J. A. Harvie Brown, F. R. S. E., F. Z. S., &c. Stirling: Printed at the Journal and Advertiser Office. 1881. 12 mo. pp. 12.

* V. Jahresbericht (1880) des Ausschusses für Beobachtungs-stationen der Vögel Deutschlands. Journ. für Ornithologie, XXX Jahrg., Heft 1, Jan. 1882, pp. 18-110.

area of observation includes (1) "Norddeutschland," with 6 observers; (2) "Mittledeutschland," with 23 observers; (3) "Süddeutschland und Oestreich-Ungarn," with one observer; (4) "Alpenland," with 3 observers. These divisions are subdivided into 12 lesser districts, four of which are unfortunately without observers, while the middle district of Central Germany has 19. The large area included in the observation field is thus quite unequally supplied with observers, while important parts are as yet unoccupied. There are, however, reports from no less than 36 stations, and the *résumé* of the observations taken forms a paper of great interest and value.

While the collection of data on the migration of birds is carried on systematically on a large scale in Europe, little, we regret to say, is being done in this country, aside from the praiseworthy work of Mr. W. W. Cooke of Jefferson, Wisconsin.* Our great breadth of territory, together with the large number of widely scattered, competent observers, offers unusually favorable conditions for prosecuting an investigation of this interesting subject. What we need is organized effort on a large scale, and we hope it will not be long before persons of leisure and fitness for the work will supplement and extend the work Mr. Cooke has so intelligently begun, till the whole area from the Rocky Mountains at least to the Atlantic seaboard will be suitably covered by observers. As a result of such observations we should at least soon learn with reasonable definiteness just where our hardy migrants winter, and their northern limit of distribution at that season, and also what are the coincident, if not the causative, meteorological and other conditions of the various successive "migratory waves."

Mr. Cooke's scheme contemplates a large number of observing stations, not all of which are as yet filled. From his published reports he appears to have correspondents at 44 stations, distributed as follows: Texas, Florida, Georgia, Arkansas, Kentucky, and Indiana, each 1; Kansas and Mississippi, each 2; Tennessee, Wisconsin, and Minnesota, each 4; Missouri, 5; Iowa, 6; Illinois, 8. The number, except in one or two of the States named, is of course quite inadequate, and there are no reporters from Alabama, Louisiana, and Nebraska, and by far too few in Kansas, and in most of the other states already on the list. We sincerely hope that these deficiencies may be soon filled, and that Mr. Cooke will receive the co-operation he desires and so well merits. If the work goes on, as we sincerely hope it may, the proper elaboration and publication of the results will prove a work of no trifling magnitude, and aid in its prosecution may well be one of the subjects the proposed American Ornithologists' Union may properly feel called upon to consider and encourage.†

* Bird Migration in the Mississippi Valley. By W. W. Cooke. Forest and Stream, XIX, Nos. 15, 16, 20, pp. 283, 284, 306, 384, Nov. 9 and 16, and Dec. 14, 1883.

Mississippi Valley Migration. By W. W. Cooke. Ornithologist and Oölogist, VIII, Nos. 4-7, April-July, 1883, pp. 25-27, 33, 34, 41, 42, 49-53.

† Since the above was written the American Ornithologists' Union has been formed, and a Committee appointed to co-operate with Mr. Cooke and his corps of observers. (See this issue of the Bulletin, p. 224.)

Mr. Cooke, in his reports, evidently has an eye to condensation, a number in parenthesis (as "(30)"=St. Louis, Mo., O. Widman) standing for the name of the station and observer; his matter is pertinent and in most cases well arranged; while his summaries respecting the movements of particular species, as given in his later papers, show at a glance what are the results attained.—J. A. A.

BEAN'S NOTES ON BIRDS COLLECTED IN ALASKA AND SIBERIA.*—Dr. Bean, while investigating the fish and fisheries of Alaska in the summer of 1880, devoted incidentally some time to birds. Many of the species were obtained from localities within the Arctic Circle, and several were added to those previously known from Alaska. The list numbers 77 species, with annotations, and in some cases tables of measurements, notably in the case of *Melospiza cinerea*. The paper closes with a table of localities showing where the species were collected. Among the species secured was a specimen of *Eurynorhynchus pygmaeus*. "*Empidonax difficilis* and *Buteo borealis calurus* were obtained for the first time in the territory. The range of *Actodromas acuminata* was extended northward to Port Clarence." *Diomedea melanophrys* was observed (but not taken) "about 1,060 miles west of Cape Mendocino, California," and on this ground has been added by Mr. Ridgway (this Bulletin, Vol. VII, p. 258) to the North American fauna.—J. A. A.

OLD WORLD BIRDS IN THE NATIONAL MUSEUM.—Mr. Ridgway has published † a list of Old World birds in the National Museum with the object to render apparent the desiderata of the Museum among Old World species. The numeration and classification adopted is that of Gray's well-known "Hand-list."—J. A. A.

STEJNEGER ON THE CYGNINÆ.‡—The external and osteological characters are given in detail, with diagnoses of the genera and species, discussions of various points of nomenclature, and a careful exposition of the distinctive feature of the nine species recognized. The affinities of the genus *Coscoroba* are dwelt upon at length, with the result of referring it to the *Anatinæ*. Besides the extinct genus *Palæocycnus* (Stejn., gen. nov.), the author recognizes four genera of Swans, namely *Sthenelus* (gen. nov.), *Cygnus*, *Olor*, and *Chenopsis*. The two North American species are assigned to *Olor*.—J. A. A.

* Notes on Birds collected during the Summer of 1880 in Alaska and Siberia. By Tarleton H. Bean. Proc. U. S. Nat. Mus., 1882, pp. 144-173. July 25, 1882.

† Catalogue of Old World Birds in the United States National Museum. By Robert Ridgway. Proc. U. S. Nat. Mus., 1881, pp. 317-333, March, 1882.

‡ Outlines of a Monograph of the Cygninæ. By Leonhard Stejneger. Proc. U. S. Nat. Mus., 1882, pp. 174-221, figg. 16. July 25, 1882.

TURNER ON *LAGOPUS MUTUS* AND ITS VARIETIES.*—The author believes, as held by many authors, that the "European birds *mutus* and *alpinus*" constitute "but a single species having the name *Lagopus mutus* Leach, while the American bird may be recognized as a fairly definable race to be called *Lagopus mutus rupestris* (Gm.) Ridg. Four races are recognized, as follows: 1. *Lagopus mutus*, Europe; 2. *L. mutus rupestris*, Arctic America; 3. *L. mutus reinhardti*, Greenland and Labrador; 4. *L. mutus atkhensis*, Atkha Islar d, Aleutian Chain. The author states that during the time of the summer plumage scarcely a day passes without the general color of the plumage varying by the appearance or loss of some feather, and that it is scarcely possible to find two birds of the same sex, age, and locality which do not differ to an appreciable degree in color. Detailed descriptions and measurements are given of a considerable number of specimens of each race.—J. A. A.

REICHENOW'S "DIE VÖGEL DER ZOOLOGISCHEN GÄRTEN."†—Dr. Reichenow's handbook for bird-keepers is designed to furnish bird-lovers who are not ornithologists with the means of readily identifying such species as are kept in zoological gardens, parks, and aviaries, and seems to be well adapted to that end. The first part, recently issued, treats of 693 species, 235 genera, and 45 families, belonging to the 11 "orders" *Brevipennes*, *Urinatores*, *Longipennes*, *Steganopodes*, *Lamellirostris*, *Cursores*, *Gressores*, *Gyrantes*, *Crypturi*, *Rasores*, and *Raptatores*. Concise diagnoses are given, not only of the species and genera, but of the higher groups, and English and French, as well as German, vernacular names are supplied for the species. No synonyms are cited, even in cases where the names preferred by the author are not those most generally in use, nor on their bibliographical references. In the introduction the author gives a "Vogel-Stammbaum," in illustration of his views of the relationship of the various groups of birds, which he divides first into 7 Series ("Reihen"), and these into 16 orders, with apparently about 100 families. As a popular handbook for German readers of birds kept in parks and aviaries the work seems worthy of generous commendation.—J. A. A.

REICHENOW'S "DIE ENTENVÖGEL DER ZOOLOGISCHEN GÄRTEN."‡—In a paper of 16 quarto pages Dr. Reichenow enumerates the species of *Lamellirostris* (*Anatidæ* and *Palamedeidæ*), giving brief diagnoses of the species kept in zoological gardens, and the characters of the genera subgenera and higher groups, prepared in the interest of practical bird-keepers.—J. A. A.

*On *Lagopus mutus*, Leach, and its Allies. By Lucien M. Turner. Proc. U. S. Nat. Mus., 1882, pp. 225- , July 29, 1882.

†Die Vögel der Zoologischen Gärten. Leitfaden zum Studium der Ornithologie mit besonderer Berücksichtigung der in Gefangenschaft gehaltenen Vögel. Ein Handbuch für Vogelwirthe. Von Dr. Ant. Reichenow. In zwei Theilen. [Theil I.] Leipzig, 1882, 8vo. pp. xxx + 278.

‡Die Entenvögel der Zoologischen Gärten. Von Ant. Reichenow. Ornithologisches Centralblatt, VII Jahrg., Nos. 1-6. Jan.-May, 1882, pp. 1-5, 17-23, 35-40.

LINDEN ON DOMESTICATION OF WILD DUCKS.*—After brief reference to the various species of wild Ducks that formerly frequented Lake Chau-tauqua, Western New York, which have now mostly become rare, Mr. Linden summarizes the results of systematic efforts continued for nearly thirty years by Mr. George Irwin at the above-named locality to domesticate several of the species. These were the Mallard, Dusky Duck, Wood Duck, Blue-winged Teal, and American Swan. All of these bred freely and reared their young in confinement, but the Mallard and Dusky Duck proved the "most tractable for domestication," and readily became transformed into "tamed barn-yard fowl." The Dusky Duck, Mr. Linden states, is fully as domesticable as the Mallard, with which it readily crosses.—J. A. A.

MINOR ORNITHOLOGICAL PUBLICATIONS.—365. *Rarer birds of Massachusetts*. By Arthur P. Chadbourne. *Quarterly Journal of the Boston Zoölogical Society*,† Vol. I, 1882, pp. 4, 5, 20-24, 30-35.—A list of about 80 species, with references to the original authorities for their occurrence. *Mimus polyglottus* is given as doubtfully entitled to a place in the list, "owing to many [of the specimens taken] being escaped cage-birds," the author having apparently overlooked the fact of its having been found breeding at Springfield (see Proc. Essex Inst., IV, p. 67). We may add that we are credibly informed of two later instances of its breeding at Springfield. *Cardinalis virginianus* is placed in the same category, but it is hardly "probable" that all the specimens recorded were escaped cage-birds.

366. *Dendroica pinus in Winter*. By Robert W. Hogg. *Ibid*, pp. 25, 26.—Record of a specimen taken, and of others seen, in Framingham, Mass., Dec. 5, 1881.

367. *Another Spotted Egg of Empidonax minimus*. By R. Hayward. *Ibid*, p. 26.—One of a set of three eggs, found at Marblehead, Mass., July, 1880, had "a ring of light brown spots at the larger end."

368. *Baird's Sandpiper at Marblehead, Mass.* By Charles R. Lamb. *Ibid*, p. 37.—Taken Aug. 15, 1881.

369. *A Third Specimen of the Swallow-tailed Gull (Xema furcatum)*. By C. J. Maynard. *Ibid*, p. 37.—On the authority of Mr. Howard Saunders of London, but locality of capture not stated.

370. *A List of Birds observed near Bradford, Penn.* By James A. Tuelon. *Ibid*, I, pp. 47-52; II, pp. 8-11.—(For further notice of this paper see this Bulletin, Vol. VIII, p. 171.)

371. *Ornithological Notes from the Magdalen Islands*. By C. J. Maynard. *Ibid*, I, pp. 52, 53.—Interesting notes on 8 species, from observations by "A. M. Frazer" [= Frazar]. *Curvirostra leucoptera* in nestling plumage taken June 18-26, 1882.

* On the Domestication of some of our Wild Ducks. By Charles Linden. Bull. Buffalo Soc. Nat. Sciences, Vol. IV, No. 2, pp. 33-39, 1882.

† This is the organ, now in its second volume, of a small society of young naturalists, recently established in Boston. Vol. I, 8vo, pp. iv+58, 1882. It is well printed and carefully edited, and contains notes of interest in various departments of Zoölogy.

Volume VII of the "Ornithologist and Oölogist" (March-December, 1882, pp. 97-192; J. M. Wade, editor) contains, besides items about the movements of collectors, notices of new publications, and various short notes about common species, too numerous and of too little importance for notice in our limited space, the following notes and papers (Nos. 372-446):—

372. *American Barn Owl. Aluco flammeus americanus* (Aud.) Ridgw. By B. W. Evermann. *Ornithologist and Oölogist*, VII, pp. 97-98, 109, 110, 166, 167.—Detailed account of its breeding habits, based on the writer's experience, with many measurements of eggs.

373. *The Spotted Owl [Strix occidentalis (Zanthus) Ridg.]*. By Capt. Chas. E. Bendire, U. S. A. *Ibid.*, p. 99.—Description of nest and egg found near Tucson, Ariz., Apr. 17, 1872.

374. *Hooded Warbler. Nesting in Southern Conn.* By J. N. Clark. *Ibid.*, p. 102.

375. *A Collector in Florida.* By Chas. W. Gunn. *Ibid.*, pp. 103, 104.—Contains desultory notes on various water birds.

376. *Clarke's Crow.* By Capt. Chas. E. Bendire, U. S. A. *Ibid.*, pp. 105-107, 113, 114.—Breeding habits, etc., of *Picicorvus columbianus*.

377. *Red-headed Woodpeckers.* By A. H. Helme. *Ibid.*, p. 107.—Large numbers in the vicinity of Miller's Place, L. I., in the autumn of 1881.

378. *Least Bittern.* By M. Chamberlain. *Ibid.*, p. 110.—Its capture at various times near St. John, N. B.

379. *Hints to Collectors.* By J. M. W[hipple]. *Ibid.*, pp. 110, 111, 116-118.

380. *Sea Dove (Alle nigricans).* By W. H. Collins. *Ibid.*, p. 111.—Killed in Detroit River, Mich., Nov. 30, 1881.

381. *Notes from St. John, N. B.* By M. Chamberlain. *Ibid.*, pp. 112, 119, 120.—Notes on 15 species, from the oölogical note book (for 1881) of James W. Banks.

382. *Large-billed Water Thrush.* By F. T. Jencks. *Ibid.*, pp. 114, 115.—Includes record of the capture of five specimens near Providence, R. I.

383. *Death of H. G. Fowler.* By F. S. W[right]: and F. R. R[athbun]. *Ibid.*, pp. 116, 117.—Died at Savannah, Ga., Feb. 11, 1882, of malarial fever, contracted while on a collecting trip in Florida.

384. *Hatching Hawk's Eggs.* By William Wood. *Ibid.*, p. 118.—Under domestic hens.

385. *The Rufous-winged Sparrow.* By Capt. Chas. E. Bendire, U. S. A. *Ibid.*, pp. 121, 122.—On the habits of *Peucea carpalis*, with description of nest and eggs.

386. *Rare Birds in Nova Scotia.* By J. Bernard Gilpin. *Ibid.*, pp. 122, 123.—Various pelagic and southern species noted as taken near Halifax, some of the instances apparently not previously recorded.

387. *Gadwell [sic] Duck in R[hode] I[sland]*. By Fred. T. Jencks. *Ibid.*, p. 123.—Shot at Newport, Feb. 26, 1882—its first capture in the State, so far as known to the writer.

388. *Blue Yellow-backed Warbler. Its summer home.* By G. R. C. *Ibid.*, pp. 124, 125.

389. *Great Horned Owls' Nests and Eggs.* By J. M. W[hipple] and J. N. Clark. *Ibid.*, pp. 125, 126.

390. *American Long-eared Owl.* By Chas. E. Bendire. *Ibid.*, p. 126.—Average and extremes of measurement of 37 eggs of *Asio americanus* (Sharpe).

391. *Humming Birds. [Selasphorus alleni] in confinement.* By Mrs. C. M. Crowell. *Ibid.*, pp. 126-128.

392. *Traill's Fly-catcher. Its Nesting Habits in Ohio.* By Oliver Davie. *Ibid.*, p. 128.

393. *Malheur Lake, Oregon.* By Capt. Chas. E. Bendire, U. S. A. *Ibid.*, pp. 129-131, 137, 138.—Description of the lake and of the nesting there of the Great Blue Heron, White Pelican, and Double-crested Cormorant, with measurements of eggs, etc.

394. *Golden Eagle's Eggs.* By Snowdon Howland. *Ibid.*, p. 131.

395. *Birds of Central New York. Addendum to Revised List.* [By F. R. Rathbun?] *Ibid.*, pp. 132, 133.—Species added, 14, raising the total to 250.

396. *Notes from St. John, N. B.* By Harold Gilbert. *Ibid.*, p. 134.—Notes on the Cedar Bird, Golden-winged Woodpecker, Robin, and Bohemian Wax-wing as winter birds, etc.

397. *The Swamp Sparrow.* By W. P. Tarrant. *Ibid.*, pp. 129, 130.—Account of its nesting habits as observed at Saratoga Springs, N. Y.

398. *Curious Nesting Places.* By W. W. Worthington. *Ibid.*, p. 138.—Of Robin and Song Sparrow.

399. *Notes from California.* By W. O. Emerson. *Ibid.*, p. 139.—Chiefly on the nesting of the Anna Humming Bird.

400. *Hawk Incubation.* By F. H. Carpenter. *Ibid.*, p. 141.—Incubation in the Red-shouldered and Cooper's Hawks found to occupy 27 days.

401. *Turkey Buzzard [and] Golden-winged Warbler.* By J. H. Sage. *Ibid.*, p. 141.—The former shot at North Stonington, Conn.; the latter at Portland, Conn.

402. *Eagles in Ohio.* By Oliver Davie. *Ibid.*, p. 142.—List of Golden and Bald Eagles received by the writer during the winters of 1878-79-1881-82, with dates and place of capture.

403. *The Great-Horned Owl in Texas.* By Edgar A. Small. *Ibid.*, pp. 142, 143.

404. *Black-backed Woodpecker.* By N. A. Eddy. *Ibid.*, p. 143.—Believed to be not a rare winter resident of the pineries of Michigan.

405. *Climbers and Climbing. The Staddle.* By J. M. W[hipple]. *Ibid.*, p. 143.

406. *Purple Grackle (Quiscalus Purpureus).* Editorial. *Ibid.*, p. 144.

407. *Nesting habits.—Woodcock and Black Duck.* By J. N. Clark. *Ibid.*, p. 144.—Young Woodcock able to fly May 4, and young Black Ducks seen May 5, at Old Saybrook, Conn.

408. *Large-billed Water Thrush.* By J. N. Clark. *Ibid.*, pp. 145-147.

—Description of nests and eggs and of the breeding habits of the bird as observed at Old Saybrook, Conn.

409. *Great Blue Heronry*. By Morgan K. Barnum. *Ibid.*, p. 147.—At Syracuse, N. Y.; about 270 sets of eggs taken.

410. *Brantling at Monomoy [Island, Mass.]*. By Fred. T. Jencks. *Ibid.*, pp. 149, 150.

411. *Prairie Hen. Its Nesting Habits*. By Horace A. Kline. *Ibid.*, p. 150.—At Vesta, Neb.; where "thousands of eggs perish every year" by the late burning of the prairies.

412. *Field Glass [Ornithology]*. By G. R. C. *Ibid.*, pp. 150, 151, 157, 158.—It is to be hoped that this method will be reserved for those "who have no wish, strictly speaking, to become ornithologists or oölogists," and that observations made by persons who have "become acquainted" with birds in this way will never be put in print as a contribution to ornithology. The writer in attempting to teach this system gives an illustration of how to identify birds with a glass, his "Pine-linnets (*Chrysomitris pinus*)" being known by "the prominent and always constant bright yellow rump." Comment is needless. Watching birds through a field glass as a pleasant amusement we would not discourage, but as a method of identifying birds by novices, we do not know of a more excellent illustration of "how not to do it."

413. *Gleanings from Bendire's Letters*. Editorial. *Ibid.*, pp. 153, 154.—Extracts from letters of Capt. Bendire to the editor; they relate mainly to Owls and Waxwings as observed at Fort Walla Walla, W. T., during the winter of 1881-82.

414. *Florida Gallinule*. By Frank S. Wright. *Ibid.*, pp. 154, 155.—Abundant in the Seneca River marshes, N. Y.

415. *Savannah Sparrow*. . . . Editorial. *Ibid.*, p. 156.—Breeding on Plum Island, off the eastern end of Long Island.

416. *Climbers and Climbing. Climbing Irons*. By J. M. W[hipple]. *Ibid.*, pp. 158, 159.

417. *Lapwing (Vanellus cristatus)*. . . . By J. T. T. R[eed]. *Ibid.*, pp. 159, 160.—Its breeding habits, etc.

418. *Common European Heron (Ardea cinerea Linn.)*. By J. T. T. Reed. *Ibid.*, p. 160.

419. *American Long-eared Owl. Our first Owl's Nest*. Editorial. *Ibid.*, pp. 161, 162.

420. *Savannah Sparrow*. By M. Chamberlain. *Ibid.*, p. 162.—Breeding inland in New Brunswick.

421. *Wilson's Black Cap (Wilsonia pusilla)*. By M. Chamberlain. *Ibid.*, p. 162.—Female with the black cap.

422. *European Starling (Sturnus vulgaris Linn.)* By J. T. T. Reed. *Ibid.*, p. 163.—Short account of its habits.

423. *Rose Breasted Grosbeak [in Confinement]*. Editorial. *Ibid.*, p. 164.—Further account of "Jack," a pet bird. (See *antea*, No. 335, Vol. VIII, p. 177.)

424. *California Winter Songsters*. By W. O. Emerson. *Ibid.*, pp. 165, 166.—Notes on 8 species.
425. *Eggs in a Set*. By N. A. Eddy. *Ibid.*, p. 167.—Relates chiefly to the Fish Hawk.
426. *Snowy Owl (Nyctea scandiaca)*. By J. G. Smith. *Ibid.*, p. 168.—On the prairies of Iowa; smaller and whiter birds in cold winters, darker and larger ones in warm winters.
427. *Black-Crested Flycatcher*. By B. W. Everman. *Ibid.*, pp. 169, 170, 177-179.—Habits, nest, and eggs of *Phainopepla nitens* as observed in California.
428. *Thrushes*. [By Chas. Edw. Prior.] *Ibid.*, p. 170, 171.—Nesting of Wilson's and Wood Thrushes.
429. *Birds of New York*. By C. Hart Merriam, M. D. *Ibid.*, p. 171.—Outline of the plan of his proposed work on the subject.
430. *Late Breeding of the Hermit Thrush in Northern New York*. By C. Hart Merriam, M. D. *Ibid.*, p. 171.—Fresh eggs found August 24, 1870, at Locust Grove, Lewis Co.
431. *Fresh work in an Old Field*. By J. M. W[hipple]. *Ibid.*, p. 173.—Finding of nest and eggs of the Nashville Warbler.
432. *Wilson's Thrush (Turdus fuscescens)*. By C. O. Tracy. *Ibid.*, p. 174.—Nesting habits, and measurements of 6 sets of eggs.
433. *The Bobolink*. By C. O. Tracy. *Ibid.*, p. 173.—Notes decrease of at Taftsville, Vt.
434. *The Ruff (Machetes pugnax)*. By J. T. T. R[eed]. *Ibid.*, p. 175.—Brief account of the species.
435. *Climbers and Climbing*. By D. E. Stone. *Ibid.*, p. 175.—Relates to a former article on the same subject by "J. M. W."
436. *Climbers and Climbing*. Editorial? *Ibid.*, p. 176.—Describes the feats of Herman Ill in climbing trees for birds' nests.
437. *Eggs in a Set*. By Philo Smith, Jr., *Ibid.*, p. 182.—Relates to various species.
438. *The Great American Egg-hog*. By Louis A. Zerega. *Ibid.*, p. 183.—Deplores especially the wholesale robbery of Heronries.
439. *Curious Nesting Places*. By W. W. Coe. *Ibid.*, pp. 183, 184.—Bluebirds building in a chimney, Robins in a Martin box, etc.
440. *The Wood-thrushes (Hylocichla) of New Brunswick*. By M. Chamberlain. *Ibid.*, pp. 185-187. [Also published in the "Canadian Sportsman and Naturalist," III, Jan., 1883, pp. 201-203.]
441. *Tufted Titmouse*. By H. A. Atkins, M. D. *Ibid.*, p. 189.—Three instances of its capture at Locke, Mich., recorded.
442. *Cuckoos*. [By J. N. Clark?] *Ibid.*, p. 189.—Eggs of the Yellow-billed and Black-billed Cuckoos found in the same nest.
443. *Great White Egret (Herodias alba egretta)*. By J. N. Clark. *Ibid.*, p. 189.—Capture of two specimens in Southern Connecticut.
444. *Olive-sided Flycatcher*. By C. O. Tracy. *Ibid.*, pp. 189, 190.—Description of nest and eggs found at Taftsville, Vt.

445. *The Cærulean Warbler*. By J. H. Langille. *Ibid.*, pp. 191, 192.—Description of habits, nest and eggs, as observed near Buffalo, N. Y.

446. *Notes from Colorado*. By D. D. Stone. *Ibid.*, pp. 191, 192.—Describes nests and eggs of the White-crowned Sparrow, "Mountain Mockingbird," "Oregon? Snowbird," "Stellar's [*sic*] Jay," etc. See corrections by Robert Ridgway in *O. and O.*, VIII, p. 13, where the "Mountain Mocking Bird" is said to be Townsend's Solitaire, etc., etc.

447. *The Migration of Birds*. By J. A. Allen. *Scribner's Monthly*, XXII, Oct. 1881, pp. 932-938.—An attempt to present a general summary of present knowledge of the causes and phenomena of the migratory movement, with reference more especially to North American Birds.

448. *Birds of Amherst*.—[By Winfred A. Stearns.] *Amherst Record* (newspaper), June 13, July 11, 18, and 25, and August 8, 1883.—An annotated list of 157 species, containing several records of interest.

449. *The Tragedies of the Nests*. By John Burroughs. *Century Illustrated Monthly Magazine*, XXVI, pp. 681-687, Sept. 1883.—On the destruction of eggs and young by predaceous birds and mammals. Advises the destruction of all red squirrels and weasels in behalf of the birds.

450. *Bits of history of the Great Auk*. [By Winfred A. Stearns.] *Fishkill Standard* (newspaper), Fishkill Landing, N. Y., June 30, 1883.—A good account of the species, compiled from various sources.

451. *List of Birds observed at St. Berthold, D. T., during the month of September, 1881*. By J. W. Hoffman, M. D. *Proc. Boston Soc. Nat. Hist.*, XXI, pp. 397-405, Oct., 1882.—Notes on 58 species. Describes the method of capturing the Bald Eagle practised by the "Eagle Hunters of the Hidatsa and Arikara Indians, namely, by concealing themselves in holes in the ground excavated for the purpose, baiting with a live rabbit or domestic fowl, and seizing the Eagle by the legs when he alights to secure the bait!

452. *Observations of the Nesting Habits of the Guillemots at Bird Rock [Gulf of St Lawrence]*. By Col. N. S. Goss. *Trans. Kansas Acad. of Science*, VIII, 1881-82, pp. 59, 60.—From differences observed in the eggs and habits of the birds the writer believes that *Lomvia ringvia* will prove to be not an individual phase merely of *L. troile*, as now generally held.

453. *Notes on Meleagris ocellata Cuvier (lege Temm.)*. By Geo. F. Gaumer. *Ibid.*, pp. 60-62.—Account of external characters and habits.

454. *Notes on the Habits of the Momotidæ*. By Geo. F. Gaumer. *Ibid.*, pp. 63-66.—Refers especially to *Eumomotus superciliaris*, and the mutilation of the tail, which the birds themselves effect with the bill.

General Notes.

THE WILLOW THRUSH AND HOLBÖLL'S LINNET IN ILLINOIS.—Mr. Ridgway identifies my No. 1568 as *Hylocichla fuscescens salicicola* (lately described by him in Vol. IV, Proc. U. S. Nat. Mus.). It was shot in a willow tree in my yard, Sept. 16, 1877. It sat silent and motionless. The sexual organs were not distinguishable, having apparently been destroyed by a small white worm found in their place. (This is not the first instance I have noted of birds, *far from their usual habitat*, having this white worm gnawing at their vitals. May this not account for their straggling off?) Mr. Ridgway also identifies No. 4188, ♀, as *Egiothus linaria holboelli*, which was shot in this city by Mr. Geo. F. Clingman, Nov. 2, 1878.—H. K. COALE, *Chicago, Ills.*

NEST AND EGGS OF MYIADESTES TOWNSENDI.—These being not yet well-known, an account of a recent find may be interesting. The specimens, accompanied by a skin, were presented to me by Mr. Wm. G. Smith, of Buffalo Creek, Jefferson County, Colorado, where they were taken. Mr. Smith writes: "The nest I found on June 18, 1883, in the end of a large hollow fallen log; it was about three feet off the ground and about one foot from the end of the log. The loose material sent with it was placed on the outer side to keep it level. The female was sitting, and I approached within a few feet before she flew off. As there was a Steller's Jay close by, I thought it prudent to take the eggs at once. I put two Brewer's Blackbird's eggs in the nest, and the parent bird took to them as soon as I moved off a few yards. Two days afterward the egg-shells lay upon the ground, most likely the work of the Jay, as I have often known this bird to do. The locality was the side of a rather high hill."

The foundation of this nest is a great quantity of trash, including some bits of stick as thick as one's little finger. Upon this rests the nest proper, constructed chiefly of pine needles, grasses and disintegrated weed-stalks—the whole loose and slovenly, hardly to be handled without coming to pieces, without any well-defined brim or very regular circular disposition of the material. The nest is about six inches across outside; its depth cannot be given, as it merges into the trash of the foundation; the cavity is quite shallow. As sent to me, the whole structure fits pretty closely in a box 10x7x4 inches.

The two eggs differ from each other in color as much as those of the Song Sparrow might, and not distantly resemble Song Sparrow's eggs. The ground is dull white; in one case wreathed about the butt, and elsewhere sparsely sprinkled with dull reddish-brown surface-markings and shell-spots duller still; in the other sample so heavily marked all over with a brighter and more chocolate brown that the ground-color scarcely appears. Neither is noticeable in shape; the size is about 0.95x0.70.—ELLIOTT COUES, *Washington, D. C.*

THE MOCKING BIRD IN WESTERN KANSAS AND THE NORTHERN PHALAROPE IN SOUTHERN WYOMING.—During two seasons' active collecting in the region of Fort Wallace in Western Kansas, I have found the Mocking Bird (*Mimus polyglottus*) not rare, as Mr. Goss (this Bulletin, VIII, p. 188) thought they must be for such an altitude and latitude, but common during the season, and many of them undoubtedly breed there. Frequently when camped under some solitary cottonwood, I have known from one to four of these birds to be overhead among the branches, and that too only a few yards above us. Numerous specimens were obtained and many more might have been. I do not recollect meeting them except along the valley of the Smoky Hill and its principal tributaries.

Although I never took a specimen of the Northern Phalarope in Western Kansas (and I have shot not a few water birds in the very ponds where Mr. Goss had such good success), yet I have seen them in June in flocks of several hundred at Lake Cuad in Southern Wyoming. As Mr. Goss observed, they chose the turbulent waves far beyond gunshot range, flying about apparently in sport. The telegraph wire runs close to the shore of Lake Caud, and I at one time picked up a number of specimens killed by the wire from the flock passing by it; one of which had a wing severed from its body without a drop of blood having marred its beautiful plumage! Wilson's Phalarope, though breeding there in numbers, always chooses the meadow lands, are very rarely seen upon the lake, and then only close to the shore. As in the Northern Phalarope, Wilson's Phalarope also has the female far more richly marked than the male.—S. W. WILLISTON, *New Haven, Conn.*

NEST AND EGGS OF *PARUS MONTANUS*.—Mr. Wm. G. Smith sends me from Colorado the nest and two eggs of the White-browed Chickadee, of whose breeding very little is known. The nest consists of a handful of matted fur, apparently of a rabbit, mixed with some small feathers. It was placed in a hollow of a pine tree, about fifteen feet from the ground, and contained six eggs nearly ready to hatch. The eggs are *white, unmarked*, contrary to the rule in the genus and family, but as in the neighboring genus *Psaltiriparus*.—ELLIOTT COUES, *Washington, D. C.*

THE GRAY-CROWNED FINCH IN CONFINEMENT.—I have the good fortune to have in my possession a fine, live specimen of *Leucosticte*, which I believe to be a male and a last year's "young of the year."

During February of this year (1883), which in this section of the country (Sioux City, Iowa) was an extremely cold month, many northern birds were driven south to feed and take shelter among us. During this time, when my collection of Snowy Owls and Rough-legged Hawks (*Archibuteo lagopus*) was rapidly increasing, the Gray-crowned Finches also came to pay us a visit. Although I did not see any at the time, it is evident they were here, for the bird I now have, with several others, was captured at that time by some boys in the western part of this city. It is the first time they have been known to visit this section. The wings of

the birds were cut in such a way that they could not fly, and they were left to roam about the premises. The friend from whom I received my bird, secured by an accident this one the same month it was caught.

This gentleman informed me that when he purchased the bird, the tail feathers were out, and the wing feathers cut very close to the body; but what attracted him more particularly was its bright rose color. Upon my examination, about the middle of May, I found the bird in a very forlorn looking condition. The wing feathers were fully grown, but the tail feathers had again been pulled out, and though the rose color was very bright, almost as bright as in a Cassin's Purple Finch at its best, the general appearance of the bird was a sorry one. Carefully examining the coloration of the bird, I found that the rose color was very bright on the rump and crissum, and that it continued along the abdomen and on to the breast, well up to the fore neck. The gray, which was strongly silvered, extended well down on the nape, and up to the crown, thence passed towards the bill as far as the lores, encircling the eyes and covering the auriculars, but leaving a dark chocolate patch at the temples, which formed the dividing line at that point between the gray above and below, and connected with the like color of the neck. The patches on the crown, chin, and throat were very nearly of the same color,—dark brown; the crown patch might be called a black. Bill and feet black, the base of the bill encircled by an indistinct line of yellowish-white feathers. My friend informed me that but little change had taken place in the color of the bird from February to this date, except that the rose tint had become brighter.

The bird was represented as being a fine singer and perfectly contented, having for a companion a Canary. Shortly after this I started on my western tour, and, on returning a few days ago, this rare bird was presented to me. He is now (August 22) as fine a looking little fellow—plump, healthy and contented—as any bird lover would wish to have for a pet or study.

The summer has been, and is now, quite a sultry one, but this high-altitude bird having been kept in a cool place seems to fully enjoy his confinement. For one month he has not uttered a note, but has been engaged in putting on a new dress, which thus far presents the following: General color, dark chocolate, the feathers of the wings and tail almost black, with edgings of yellowish-white; the feathers on the neck, breast, and abdomen edged also, but with a more ashen tinge. Points of upper tail-coverts very prominent with yellowish-ash. *No rose color anywhere.* Crissum and tibia very light ash; lower tail-coverts light ash, with a few black central spots. Bill *yellow*, with black tip, and immediately back of this black tip the yellow has a peach-blossom tinge. The gray on the head is much duller than when I saw the bird last May, and now falls lower upon the neck, but, instead of covering the auriculars, only encircles the eyes with a very narrow line above and below, which disappears at the lores. The coloring of the auriculars is such that I think before long this part too will be of a like gray color, and will finally take on the former silvery effect. The crown patch of dark brown continues from its

connection with the gray until it is separated from the bill by a very light line of pure white feathers encircling the base of the bill. The chin and throat patch are uniform umber brown. Feet and tarsi black.—D. H. TALBOT, *Sioux City, Iowa.*

DESCRIPTION OF THE NEST AND YOUNG OF THE PYGMY OWL (*Glauucidium gnoma*).—During my absence from Fort Klamath, between June 9 and 24, 1883, one of my men accidentally found the nest of this Owl on June 10. It was in an old Woodpecker's hole in a live aspen, about twenty feet from the ground. The cavity was six or seven inches deep, and filled for about half the distance with feathers of various species of birds. When opened by me it contained four young, which I took to be about ten days old. They were feeding on a Chipmunk (*Tamias asiaticus townsendi*) which was still warm. One of the parents—the female—was also secured at the same time. The tree in which the nest was found stood in an open, exposed position, within ten yards of one of the butts of our target range which is in daily use. Although I searched carefully for pieces of the egg-shells I failed to find any.

The plumage of the young is as follows: Top and sides of head and neck dark ash, *unspotted*; rest of upper parts dark reddish-brown or brownish-chestnut; wings spotted with ochraceous; beneath white with reddish-brown along the sides and numerous longitudinal streaks of dull black on the breast and belly; an ill-defined band of dusky across the throat; sides of the throat pure white.—CHARLES E. BENDIRE, U. S. A., *Fort Klamath, Oregon.*

THE BALD EAGLE FISHING.—A few days ago, while driving by a creek that makes in from the Penobscot River, I noticed a Bald Eagle circling around high in air, above the creek. Presently he began to descend in slow spirals, and I could plainly see that he spied some object in the water, for he bent his neck downward and partly extended his legs; then taking a wide circle he suddenly darted down obliquely and stretching forth both legs to their full length trailed them for several feet along the surface, finally making a quick thrust with the right foot and seizing a small fish near the head, bore it away. It was plain that he saw the fish from the first and circled only for the purpose of getting behind it and approaching unseen. Altogether it was the best peice of stil'l-hunting I ever saw, and it is the first time I have seen an Eagle catch a fish.—MANLY HARDY, *Brewer, Maine.*

A FLOCK OF WHITE HERONS (*Herodias egretta*) IN EASTERN MASSACHUSETTS.—Eight of these birds paid a visit to the salt marshes in the town of Quincy in August last, and on the 23d of that month Mr. Geo. H. Bryant succeeded in shooting one. I saw the mounted bird in the shop of P. W. Aldrich, Washington St., Boston, and it was a handsome specimen. The flock was much harassed by gunners, and another Heron is reported to

have been killed since. As stated in "New England Bird Life," where may be found the record of the species for this section, it appears to be a more frequent visitor than either the Snowy or Little Blue Heron.

I know of no record of the occurrence in New England of the Louisiana Heron or Reddish Egret.—H. A. PURDIE, *Boston, Mass.*

HERODIAS EGRETTE AT AMHERST.—I record with pleasure that while I was away from home, recently, three of these beautiful and rare birds were seen in the swamp about what we here call "Hadley Pond." One of these, a fine specimen, was shot and purchased for the Amherst College collection. It is now being stuffed at Mr. O. B. Deane's at Springfield. I do not recall that the bird has been authentically noted from this State since 1875, at Plymouth, Mass. The Amherst specimen was taken within a day or two of Aug. 27.—W. A. STEARNS, *Amherst, Mass.*

WILSON'S SNIPE (*Gallinago wilsoni*) NESTING IN MASSACHUSETTS.—As I was hunting for Least Bitterns' nests in one of our swamps in Brookline, where they breed in considerable numbers,—that is, I found three nests this year there, one with three eggs, the other two with five young ones apiece,—I thought I would leave the sedges where they build and look among the high grass, which grows at the side of the marsh for a Carolina-Rail's nest. Just on the border of the grass I started up a Snipe, that seemed to me to sit closer than usual and in a very curious manner. She came very near to me, chiding me as if in great trouble. I looked in the grass very carefully and finally found her nest, with four half-grown young birds, which, when I approached, scampered off among the high grass which surrounded the nest. They seemed to be able to run about and take care of themselves perfectly well. The date was the 18th or 19th of June, I cannot be sure which, as I have mislaid my book in which it was entered. I think the eggs must have been laid about the second or third week in May, which seems to me quite early.—NATHANIEL A. FRANCIS, *Boston, Mass.*

BAIRD'S SANDPIPER AT SCARBOROUGH, MAINE.—Two immature examples of Baird's Sandpiper (*Actodromas bairdi*) were shot at Little River, Scarborough, on September 11, 1883, by my friends Messrs. Winthrop Root and Fred. Mead, who gave me an opportunity of examining their specimens in the flesh. The birds were killed together, but were unaccompanied by others of any species.

It will be remembered that, up to the present time, but one instance has been recorded* of the occurrence of Baird's Sandpiper on the Maine coast.—NATHAN CLIFFORD BROWN, *Portland, Maine.*

* See this Bulletin, Vol. II, p. 28; also Proc. Portland Soc. Nat. Hist., April, 1883.

CORY'S SHEARWATER (*Puffinus borealis*) OFF THE COAST OF MASSACHUSETTS.—On the 2d of last August I was out in a yacht collecting sea-birds, about thirty miles eastward from the southeast end of Cape Cod. Wilson's Petrels, Pomarine Skuas, Greater and Sooty Shearwaters were abundant. Both these Shearwaters were often seen sitting on the water in flocks, associating freely with one another, and were easily approached.

On one occasion I sailed up to quite a large flock, and shot a *P. fuliginosus*. As the rest rose, I suddenly perceived amongst them a Shearwater entirely new to me, and my other barrel soon brought it down. The yacht was put about, and I was on the point of laying hands on the prize, when it suddenly started up, and was gone,—much to my chagrin. Soon, however, I saw a similar one flying about in company with several of the common Shearwaters. It presently came near, and was shot, proving to be a Cory's Shearwater. This was enough to keep me on the lookout for more, and when about half way in to land, another came scaling along over the water, and was also secured. These were all that I saw. One of the fishermen, to whom I showed the birds, reported having seen a few others the next day. This, however, may be open to some doubt.

In habits they perfectly resemble the other species; but are readily distinguished from *P. major* by their lighter colors, and conspicuously large, yellow bill. They are very tame, and when engaged in feeding may almost be run down by a boat. Considerable effort is shown in rising from the water, but when once a-wing, they fly with great swiftness.

Nothing is known of them by the fishermen, who perhaps overlook them among the thousands of the other commoner varieties. Specimens were first taken by Mr. Charles B. Cory in nearly the same locality where mine were captured, and were described by him in the Bulletin of April, 1881.—HERBERT K. JOB, *Boston, Mass.*

ADDENDUM TO LIST OF BIRDS ASCERTAINED TO OCCUR WITHIN TEN MILES FROM POINT DE MONTS, PROVINCE OF QUEBEC, CANADA; BASED CHIEFLY UPON THE NOTES OF NAPOLEON A. COMEAU.—Mr. Comeau has recently sent me skins of the following species that were not in the original list (see this Bulletin, Vol. VII, No. 4, pp. 233-242, Oct. 1882). They were all killed at Godbout in May and June, 1883.

148. *Dendroæa cærulescens*.—June 7. ♂.

149. *Vireo flaviviridis*.—May 13. For further remarks upon this species, which has not previously been recorded from Northern North America, see page 213.

150. *Dolichonyx oryzivorus*.—♂.

151. *Scolecophagus ferrugineus*.

152. *Empidonax minimus*.

153. *Empidonax trailli*.—June 7. ♀.

154. *Contopus borealis*.—June 6. ♂.

During the fall migration Mr. Comeau secured specimens of two additional species new to the locality. They are:

155. *Tryngites rufescens*.—August 28.

156. *Tringa alpina americana*.—August 28.

In September, 1882, Mr. Comeau shot another specimen of the Carolina Dove (*Zenaidura carolinensis*).—C. HART MERRIAM, M. D., *Locust Grove, N. Y.*

THE MOVEMENTS OF CERTAIN WINTER BIRDS.—From a letter lately written me by Mr. Manly Hardy, I make the following interesting extracts: "I see in the 'Canadian Sportsman' an article on the migration of Owls which agrees nearly with my own observations, and I would like to have the question presented to the readers of the Bulletin . . . 'why do Owls, Grosbeaks, Crossbills and some other northern birds come south in winter?'

"The article referred to states that Snowy and other migratory Owls are most numerous there [Canada?] in December and January. By reference to a list of dates of capture of a large number of Snowy Owls, I find that most of them have been taken from November 15 to December 10, and very few later than that date. With Hawk Owls it is the same. Grosbeaks, in winter when they are plenty, come late in November, and are nearly all gone by December 15, though a few remain all winter. Now why do these birds come here at all? I can say almost positively that the two reasons usually given, viz., lack of food and extreme cold—are not the real reasons. The Owls are invariably fat when they arrive and cannot have lacked for food farther north. The Grosbeaks and Crossbills, also, are very fat, and do not need the berries which some persons think they depend upon, for both can live independently on the seeds of the pine and spruce. If there were not a berry in ten years they would not suffer. Moreover, the idea that any of these birds feel the cold is not entitled to a moment's consideration. The Snowy Owl, for instance, can bear as much cold as a Polar Bear. Furthermore, if either of these reasons were the true one, all these species would be likely to come the same winter, an event which does not usually happen."

The question thus raised by Mr. Hardy is an interesting one. As he maintains, the explanations which have been given to account for the movements of these birds do not seem to be entirely satisfactory. Nevertheless I cannot think that they are erroneous. Birds, like many other beings, are fond of variety. The fact that a Grosbeak or Crossbill can sustain life on the seeds of a certain tree does not necessarily prove that it may not undertake long journeys in search of *tid-bits*. Granting, also, that it can endure an Arctic winter, it does not follow that it may not *enjoy* a few months' relaxation in a warmer climate. The truth of the matter probably is, that when their breeding season is over these birds habitually wander over vast extents of country. If the winter happens to be severe in the north they find a gradual improvement in conditions southward, and naturally, taking this direction, push on until a land of plenty

is reached. Even here they do not always pause, their habitual restlessness of disposition leading them to continued search for fresh feeding-grounds. Thus they come and go, sometimes without apparent regard to conditions which govern the movements of our more regular migratory visitors.

At least this seems to me a satisfactory explanation of the problem at large; but will not other observers contribute their opinions and experience?—WILLIAM BREWSTER, *Cambridge, Mass.*

THE RIDGWAY ORNITHOLOGICAL CLUB OF CHICAGO.—We are pleased to learn that the ornithologists of Chicago have organized an ornithological society under the name of "The Ridgway Ornithological Club of Chicago." The meeting for organization was held on September 6, 1883, when a constitution and by-laws were adopted, and officers elected, as follows: President, Dr. J. W. Velie; Vice-President and Treasurer, George F. Morcom; Secretary, H. K. Coale; Curator, Joseph L. Hancock; Librarian, F. L. Rice. The name adopted, it is needless to say, is in honor of Mr Robert Ridgway, the eminent ornithologist and Curator of Ornithology at the National Museum at Washington. The society contemplates the formation of an ornithological library and museum of general ornithology. Meetings are to be held the first Thursday of each month. The Club already numbers fifteen members, and we heartily wish them success.—EDD.

INDEX TO VOLUME VIII.

- ACANTHIDOPS bairdi*, 168.
Accipiter cooperi, 30, 41, 177, 197, 235.
 fuscus, 149, 173, 178, 197.
Actodromas acuminata, 231.
 bairdi, 113, 233, 243.
 minutilla, 9.
Ægialites melodus, 9.
 montanus, 197.
 semipalmatus, 9.
 vociferus, 36, 112, 148, 174, 197.
Ægiothus canescens, 3.
 exilipes, 2.
 fuscescens, 3.
 linaria, 2, 97, 144, 149, 177.
 linaria holboëlli, 121, 239.
 rostratus, 3.
Agelæus phœniceus, 39, 63, 192.
 thilius, 134.
Agriornis maritima, 137.
Alca impennis, 175, 238.
Alcahuete, 137.
Alectorurus guira-yetapa, 140.
Alle nigricans, 234.
Allen, J. A., note on exceptions to the law of increase in size northward among North American birds, 80; capture of the Great Gray Owl in Massachusetts, 123; list of birds observed in the vicinity of Colorado Springs, Colorado, during March, April and May, 1882, 151, 189; the Wood Ibis in Massachusetts, 185.
Aluco flammeus pratincola, 41, 122, 165, 172, 175, 234.
Amblyrhampus holosericeus, 135.
American Ornithologists' Union, The, 221.
Ammodromus maritimus, 39.
Ampelis cedrorum, 235.
 garrulus, 235.
Anas boscas, 62, 118, 186, 198.
 obscura, 235.
Ancylochilus subarquatus, 113, 177.
Anorthura troglodytes hiemalis, 52, 53, 119, 120, 164, 174.
Anser albifrons, 62.
 erythropus, 62.
 gambelli, 62.
Anthus correndera, 87.
 ludovicianus, 9, 78, 155.
Antrostomus carolinensis, 40.
 nuttalli, 21, 195.
 vociferus, 175.
Anumbius acuticaudatus, 211.
Aphelocoma woodhousii, 193.
Aquila chrysaëtus, 123, 178, 197, 235.
Aramus pictus, 42.
Archibuteo ferrugineus, 197.
 lagopus sancti-johannis, 149, 246.
Ardea cinerea, 236.
 herodias, 36, 42, 149, 235, 236.
Ardetta exilis, 42, 234, 243.
Asio accipitrinus, 112, 148, 168, 183.
 galapagoensis, 168.
 portoricensis, 168.
 wilsonianus, 177, 197, 235, 236.
Astragalinus psaltria, 161.
 tristis, 58, 112, 119, 149, 161, 165.
Astrapia nigra, 55.
Astur atricapillus, 52, 118.
Asturina nitida plagata, 31, 178.
Atticora cyanoleuca, 90.
Auk, Great, 238.
Auriparus flaviceps, 76.
BAILEY, H. B., memoranda of a collection of eggs from Georgia, 37.
Baldpate, 61.
Barrows, Walter B., Birds of the Lower Uruguay, 82, 129, 198.
Bartramia longicauda, 198.
Bean, Tarleton H., notice of his "Notes on Birds collected in Alaska and Siberia," 231.
Beckham, Charles Wickliffe, notice of his "List of the Birds of Bardstown, Ky.," 227.
Bendire, Charles E., description of the nest and young of the Pygmy Owl (*Glaucidium gnoma*), 242.

- Bernicla canadensis*, 8, 62, 124, 126.
 hutchinsi, 62, 163.
 leucoparia, 62.
 occidentalis, 62.
 Bicknell, Eugene P., notice of his
 "Review of the Summer Birds of
 the Catskills," 50.
 Bien-te-veo, 200.
 Bird, Crocodile, 55.
 Indigo, 9.
 of Paradise, Elliot's, 55.
 of Paradise, Incomparable,
 55.
 of Paradise, Magnificent, 55.
 Piñon, 44.
 Bittern, Least, 42, 234, 243.
 Blackbird, Brewer's, 193.
 Marsh, 63.
 Red-and-buff-shouldered, 39.
 Red-winged, 192.
 Rusty, 52, 150.
 Yellow-headed, 193.
 Bluebird, 9, 37, 63, 144, 149, 237.
 Arctic, 153.
 Western, 153.
 Bobolink, 192, 237.
 Bob White, 41.
Botaurus lentiginosus, 177.
 Boyero, 133.
 Brasa de Fuego, 201.
 Brewster, William, Bicknell's Thrush
 (*Turdus aliciae bicknelli*) in New
 England, 12; on a collection of
 birds lately made by Mr. F. Ste-
 phens in Arizona, 21; Bendire's
 Thrasher (*Harporhynchus ben-
 dirii*) in Colorado, 57; an inter-
 esting flight of Pine Finches, 57;
 Crows fishing, 59; Holböll's Red-
 poll (*Egiothus linaria holbœlli*)
 in New England, 95; probable
 breeding of the Winter Wren
 (*Anorthura troglodytes hiemalis*)
 in Eastern Massachusetts, 119; a
 second instance of the wintering
 of the Pine Warbler in Massachu-
 setts, 120; an unusual influx of
 the Three-toed Woodpeckers (*Pi-
 coides arcticus* and *P. americanus*)
 into Eastern Massachusetts, 122;
 recent occurrence of the Flammu-
 lated Owl in Colorado, 123; *Larus*
 glaucescens in the Bay of Fundy,
 125; the White-winged Gull
 (*Larus leucopterus*) in Maine,
 125; list of birds observed in the
 vicinity of Colorado Springs, Col-
 orado, during March, April, and
 May, 1882, 151, 189; occurrence of
 a third Massachusetts men of
 the Labrador Gyrfalcon (*Falco*
 gyrfalco obsoletus), 184; the
 Scarlet Ibis in Florida, 185; the
 Common Cormorant on the
 Coast of South Carolina, 186; on
 an apparently new Gull from
 Eastern North America, 214.
 Brown, Nathan Clifford, imma-
 turity vs. individual variation,
 46; the prescient power in birds,
 63; notice of his "Catalogue of
 the Birds of Portland, Maine,"
 112; individual variation in color
 in the European Crossbill, 121;
 the Glaucous Gull (*Larus glau-
 cus*) at Portland, Maine, 186;
 Baird's Sandpiper at Scarborough,
 Maine, 243.
 Browne, F. C., the Lark Finch
 again in Massachusetts, 181.
Bubo virginianus, 41, 175, 235.
 virginianus subarcticus, 26.
 Bunting, Bay-winged, 166.
 Cow, 121.
 Henslow's, 58.
 Lark, 191.
 Leconte's, 58.
 Painted, 39.
 Snow, 126, 148.
Buteo abbreviatus, 30.
 borealis, 41, 126, 171, 172.
 borealis calurus, 231.
 lineatus, 41, 235.
 pennsylvanicus, 41.
 swainsoni, 197.
Butorides virescens, 42, 176.
 Buzzard, Ferrugineous Rough-leg-
 ged, 197.
 Swainson's, 197.
 Turkey, 29, 31, 41, 127, 197,
 235.
 CALAMOSPIZA bicolor, 191.
 Callipepla squamata, 33, 34.
 squamata castanogastris, 34.
 strenua, 33.
Callopsittacus novæ-hollandiæ, 116.
Calypte annæ, 235.
 costæ, 188.
Campephilus principalis, 40.
Camptolæmus labradorius, 55.
Campylorhynchus brunneicapillus,
 174.
Canace canadensis, 52.
 Cardinal, 117.
 amarillo, 130.
 Brazilian, 129.
 colorado, 129.
 imperial, 90.

- Cardin. Yellow, 130.
Cardinalis virginianus, 39, 59, 117, 233.
Carpodacus cassini, 160.
 purpureus, 7, 149, 181.
 Casero, 212.
Cassicus solitarius, 133.
 Catbird, 153.
Catharista atrata, 41.
Cathartes aura, 31, 41, 113, 127, 197, 235.
Catherpes mexicanus, 81.
 mexicanus conspersus, 81, 155.
 mexicanus punctulatus, 81, 169.
 Cedarbird, 235.
Centrites niger, 142.
Centrophanes ornatus, 161.
Centurus aurifrons dubius, 114.
 aurifrons hoffmanni, 114.
 aurifrons santacruzi, 114.
 carolinus, 40.
 rubriventris, 114.
 terricolor, 114.
 uropygialis, 24.
Certhia familiaris, 113, 145.
 familiaris britannica, 113.
 familiaris costæ, 113.
 familiaris mexicana, 113.
 familiaris montana, 113, 154.
 familiaris occidentalis, 113.
 familiaris rufa, 113.
Ceryle alcyon, 25, 40, 60, 150, 166, 196.
 amazona, 60.
 americana, 59, 60.
 cabanisi, 59.
 inda, 60.
 stellata, 59.
 superciliosa, 60.
 torquata, 59, 60.
Chætura gaumeri, 114.
 pelagica, 40, 178.
Chamæa fasciata henshawi, 169.
Chamæpelia passerina, 32, 41.
 passerina pallescens, 32.
 Chamberlain, Montague, New Brunswick notes, 6; development of a brood of Black-and-yellow Warblers (*Dendroica maculosa*), 121; winter birds in New Brunswick, 126.
 Chaparral Cock, 25.
Charadrius dominicus, 162, 163.
Chasiempis sclateri, 168.
 Chat, Yellow-breasted, 38, 159, 180.
Chaulelasmus streperus, 162, 163, 234.
 Checking list of North American Birds, notice of, 56.
Chenopsis atrata, 172.
 Chewink, 53, 126.
 Chickadee, 145.
 Carolina, 37.
 Hudsonian, 10.
 Long-tailed, 154.
 Mountain, 154.
 White-browed, 240.
 Chingolo, 131.
Chondestes grammacus, 181.
 grammicus strigatus, 191.
Chordediles acutipennis texensis, 21.
 popetue, 40, 118.
 popetue henryi, 196.
Chrysomitris barbata, 132.
 pinus, 57, 58, 119, 146, 147, 161, 176, 180.
 Chuck-will's-widow, 40.
 Churrinche, 201.
Cinclodes fuscus, 205.
Cinclus mexicanus, 75, 154.
Circus cyaneus hudsonius, 174, 197.
Cistothorus platensis, 87.
 stellaris, 38, 179.
Clangula americana, 62.
 glaucium, 52, 62.
Cnipolegus cyanirostris, 141.
 Coale, H. K., *Troglodytes ædon parkmani* in Kansas, 120; the Willow Thrush and Holböhl's Redpoll in Illinois, 239.
Coccyzus americanus, 26, 40, 113, 237.
 erythrophthalmus, 40, 117, 237.
Colaptes auratus, 40, 149, 177, 235.
 auratus mexicanus, 24, 25, 196.
 chrysoïdes, 24, 25.
Contopus borealis, 52, 195, 237, 244.
 frazari, 94.
 virens, 40.
 virens richardsoni, 195.
Conurus carolinensis, 40, 127.
 Cooke, W. W., migration of birds in the Mississippi Valley, 64; notice of his records of migration in the Mississippi Valley, 230.
 Coot, American, 36, 166.
 Copeton, 212.
 Corbatita, 92.
 Cormorant, Common, 186.
 Double-crested, 235.
Corvus caurinus, 116.
 corax, 52, 177, 193.
 cryptoleucus, 193.

- Corvus frugivorus*, 112.
 ossifragus, 39, 50, 54.
 Cory, Charles B., notice of his
 "Beautiful and Curious Birds," 55;
 descriptions of new species of
 birds from Santo Domingo, 94.
Cotile riparia, 39, 117.
 ruficollis, 90.
Coturniculus henslowi, 58, 174.
 lecontei, 58.
 manimbe, 131.
Coturnix communis, 112.
 Coues, Elliott, the compliments of
 the season, 1; note on "*Passer-
 culus caboti*," 58; the Burrowing
 Owl in Florida, 61; note on the
 Mississippi Kite, 61; occurrence
 of the Swallow-tailed Kite in Mas-
 sachusetts, 61; Caspian Tern in
 Ohio, 62; polygamy among *Osci-
 nes*, 63; the Barn Owl in Canada
 West, 122; wintering of Sora
 Rail at the North, 124; suscepti-
 bility of a bird to color, 181; breed-
 ing of the Mallard in New Eng-
 land, 186; nest and eggs of *Myia-
 destes townsendi*, 239; nest and
 eggs of *Parus montanus*, 240.
 Cowbird, 39, 131, 192.
 Cow-herd, 133.
 Creeper, Brown, 145, 154.
 Crossbill, 144, 148, 149.
 European, 121.
 Red, 52, 160.
 White-winged, 52, 146.
 Crow, 7, 41, 59.
 Clarke's, 43, 44, 45, 234.
 Fish, 39, 50, 54, 116.
 Cuckoo, Black-billed, 40, 237.
 Yellow-billed, 26, 40, 237.
Cupidonia cupido, 119, 172, 236.
Cyanocitta cristata, 39, 149, 175.
 stelleri, 238, 239.
 stelleri macrolopha, 193.
Cyanocorax pileatus, 136.
Cyanotis azarae, 200.
Cyclorhis viridis, 88.
Cygnus americanus, 9.
Cymochorea cryptoleucura, 168.
 leucorrhoea, 162, 163.
Cypselus saxatilis, 196.
Cyrtonyx massena, 35.
DAFLA acuta, 62, 163, 176.
 Dalglish, J. J., occurrence of *Siu-
 rus naevius* in Greenland, 179.
Dendrocæ æstiva, 66, 69, 158.
 auduboni, 158, 186.
 blackburniæ, 52, 66, 68, 69.
 castanea, 67, 70.
Dendrocæa cærulea, 238.
 cærulescens, 53, 66, 69, 165,
 176, 228, 244.
 coronata, 52, 66, 68, 69, 71,
 121, 158.
 dominica, 38.
 maculosa, 52, 53, 66, 68, 70,
 71, 121, 228.
 occidentalis, 188.
 palmarum, 66, 71.
 pennsylvanica, 66, 69, 70, 165.
 pinus, 38, 66, 71, 120, 233.
 striata, 67, 68, 69, 70, 126,
 158.
 tigrina, 66, 67, 70.
 townsendi, 158, 188.
 vieilloti bryanti, 169.
 virens, 66, 69.
Dichromanassa rufa, 243.
Diomedea melanophrys, 231.
 Dipper, 154.
Diuca minor, 131.
Dolichonyx oryzivorus, 192, 237,
 244.
 Dove, Carolina, 32, 197, 245.
 Ground, 32, 41.
 Mourning, 41.
 Sea, 234.
 Turtle, 32.
 White-winged, 32.
 Dubois, Alph., notice of his "Vari-
 bilité des Oiseaux du Genre
 Loxia," 170.
 Duck, Black, 235.
 Dusky, 233.
 Gadwall, 162, 163, 234.
 Golden-eyed, 52.
 Harlequin, 162, 163, 220.
 Labrador, 55.
 Mallard, 62, 118, 186, 198,
 233.
 Pintail, 62, 163.
 Ruddy, 36.
 Red-head, 126.
 Shoveller, 198.
 Wood, 233.
 Dutcher, William, notice of his
 paper on the Fish Crow, 50.
 EAGLE, Bald, 41, 55, 116, 235, 238,
 242.
 Caracara, 29.
 Golden, 123, 197, 235.
Ectopistes migratoria, 41.
 Egret, American, 36, 42.
 Great White, 237.
 Reddish, 243.
Elainea albiceps, 200.
 modesta, 200.
Elanoides forficatus, 61, 118, 127.

- Embernagra platensis*, 132.
Empidonax acadicus, 40, 175.
 flaviventris difficilis, 195, 231.
 hammondi, 195.
 minimus, 195, 233, 244.
 obscurus, 195.
 trailli, 235, 244.
Epimachus ellioti, 55.
 magnus, 55.
 speciosus, 55.
Eremophila alpestris, 56, 146, 148, 166, 174, 194.
 alpestris chrysolæma, 194.
 alpestris leucolæma, 193.
Ereunetes pusillus, 198.
Erismatura rubida, 36, 176.
Espinero, 211.
 chiquito, 206.
Eudocimus albus, 42.
 ruber, 185.
Eumomotus superciliaris, 238.
Eurynorhynchus pygmaeus, 231.
FALCO gyrfalco obsoletus, 184.
 islandicus, 113.
 mexicanus, 197.
 peregrinus, 113.
 richardsoni, 197.
 sparverius, 29, 173, 197.
Falcon, American Lanier, 197.
Finch, Bachman's, 39.
 Cassin's Purple, 160.
 Grass, 189.
 Gray-crowned, 240.
 Lark, 181, 191.
 Lazuli, 191.
 Pine, 57, 119, 147, 161, 180.
 Purple, 7, 149.
 Seaside, 39.
Fisher, A. K., Capture of *Ægiothus linaria holbaelli* in the Lower Hudson Valley, 121; nesting of *Chrysomitris pinus* at Sing Sing, N. Y., 180.
Flicker, Malherbe's, 24.
 Red-shafted, 24.
Florida cœrulea, 42, 113, 176, 243.
Flycatcher, Acadian, 40.
 Arkansas, 195.
 Black-crested, 237.
 Cassin's, 195.
 Great-crested, 40, 165.
 Hammond's, 195.
 Least, 195.
 Olive-sided, 52, 195, 237.
 Say's, 195.
 Traill's, 235.
 Western Yellow-bellied, 195.
 Wright's, 195.
Forbes, S. A., notice of his "Regulative Action of Birds upon Insect Oscillations," 105.
Formicarius pallidus, 114.
Fox, William H., Richardson's Owl in Southern New Hampshire, 61.
Francis, Nathaniel A., Wilson's Snipe (*Gallinago wilsoni*) nesting in Massachusetts, 243.
Freke, Percy Evans, notice of his "North American Birds crossing the Atlantic," 114; notice of his "European Birds observed in North America," 115.
Fulica americana, 36, 166.
Fuligula ferina americana, 126.
Fulix affinis, 62, 174.
 marila, 62.
Furnarius rufus, 204.
GALEOSOPTES carolinensis, 75.
Gallinago wilsoni, 186, 243.
Gallinula galeata, 82, 166, 198, 236.
Gallinule, Florida, 42, 166, 198, 236.
 Purple, 42.
Garzetta, candidissima, 42, 243.
Geococcyx californianus, 25, 116, 174, 178, 182.
Geositta cunicularia, 203.
Geothlypis æquinoctialis, 81.
 beldingi, 169.
 macgillivrayi, 159.
 philadelphia, 52, 53.
 poliocephala, 81, 82.
 trichas, 67, 81, 158.
 trichas occidentalis, 159.
 velata, 87.
Glaucidium ferrugineum, 27.
 gnoma, 27, 59, 175, 242.
 passerinum californicum, 55.
Gnatcatcher, Blue-gray, 37, 179.
Goldfinch, 58, 119, 132, 149, 161, 165.
 Arkansas, 161.
Golondrina mayor, 88.
Goose, Canada, 124, 129.
 Hutchins's, 163.
 White-fronted, 62.
Goshawk, 52, 118.
 Mexican, 31.
Goss, B. F., notes on the breeding habits of Maximilian's Jay (*Gymnocitta cyanocephala*) and Clarke's Crow (*Picicorvus columbianus*), 43.
Goss, N. S., occurrence of the Northern Phalarope and Audubon's Warbler, and nesting of the Mockingbird, in Western Kansas, 186; notice of his "Catalogue of the Birds of Kansas," 227.

- Grackle, Boat-tailed, 39, 165.
 Purple, 39, 235.
Graculus carbo, 186.
 dilophus, 118.
 Grebe, American Eared, 198.
 Grosbeak, Black-headed, 191.
 Cardinal, 39, 59.
 Evening, 146.
 Pine, 6, 118, 126, 143, 144,
 147, 148, 149.
 Rose-breasted, 236.
 Grouse, Pinnated, 119.
 Spruce, 52.
 Grundtvig, F. L., the vernal migra-
 tion of Warblers on Wolf River,
 Ontagamie County, Wisconsin,
 65.
Grus canadensis, 62.
 pratensis, 62.
Gubernatrix cristatella, 130.
 Guillemot, Black, 150.
Guiraca glauco-cœrulea, 92.
 Gull, Glaucous, 186.
 Glaucous-winged, 125.
 Herring, 7.
 Langhing, 43.
 Lesser Glaucous-winged, 216.
 Ring-bill, 162, 163, 198.
 Swallow-tailed, 233.
 White-winged, 125.
Gymnocitta cyanocephala, 43, 193.
 Gyrfalcon, Labrador, 184.
HÆMATOPUS palliatus, 42.
Haliaëtus leucocephalus, 41, 116,
 235, 238, 242.
 Hancock, Joseph L., Parkman's
 Wren in Illinois, 179.
Hapalocercus flaviventris, 199.
 Hardy, Manly, the Bald Eagle fish-
 ing, 242.
Harporynchus bendirii, 57, 153.
 cinereus, 55.
 curvirostris, 49.
 redivivus lecontei, 48.
 rufus, 37, 57, 75, 153.
 Harvie-Brown, John A., Cordeaux,
 John, et al., notice of their Reports
 on the Migration of Birds, 228.
 Hawk, Broad-winged, 31, 41.
 Cooper's, 30, 41, 197, 235.
 Fish, 29, 41, 237.
 Marsh, 197.
 Red-shouldered, 41, 235.
 Red-tailed, 41, 126.
 Rough-legged, 149, 240.
 Sparrow, 29, 41, 197.
 Sharp-shinned, 149, 197.
 Zone-tailed, 30.
Helminthophila bachmani, 38.
Helminthophila celata, 66, 67, 68,
 156, 179.
 celata obscura, 157.
 cincinnatiensis, 79.
 chrysoptera, 68, 235.
 peregrina, 52, 67, 68, 69.
 pinus, 38, 176.
 ruficapilla, 13, 66, 68, 70, 237.
 virginiae, 155.
Helminthotherus vermivorus, 177.
Hemiprocne minor, 114.
 Hen, Prairie, 236.
 Henshaw, H. W., instance of semi-
 domestication of California Quail,
 184.
Herodias egretta, 36, 42, 113, 172,
 237, 242, 243.
 Heron, Great Blue, 36, 42, 149, 235,
 236.
 Green, 42.
 Little Blue, 42, 243.
 Louisiana, 42, 243.
 Night, 36, 42.
 Snowy, 42, 243.
 White-crowned Night, 42.
 White, 242.
Hesperophona vespertina, 146.
Himantopus mexicanus, 42.
Hirundo erythrogastra horreorum,
 160.
 leucorrhœa, 89.
Histrionicus minutus, 162, 163, 220.
 Hoffman, W. J., Notice of his "List
 of Birds observed at Fort Ber-
 thold, D. T.", 54.
 Holterhoff, G., Jr., nests and eggs
 of Leconte's Thrasher (*Harp-
 orhynchus redivivus lecontei*), 48;
 Geococcyx as a vocalist, 182.
Homorus lophotus, 212.
 Hornero, 204.
 Hummingbird, Anna, 235.
 Broad-tailed, 196.
 Calliope, 59.
 Ruby-throated, 40.
Hydranassa tricolor, 243.
 tricolor ludovicianus, 42.
Hydrochelidon lariformis, 166.
 nigra, 36.
Hylocichla aliciae bicknelli, 168.
 fuscescens salicicola, 168.
Hylotomus pileatus, 40, 177.
 IBIS, Scarlet, 185.
 White, 142.
 Wood, 36, 185.
Icteria virens, 38, 159, 180.
 virens longicaudata, 227.
Icterus bullocki, 193.
 galbula, 174.

- Icterus pectoralis espinachi*, 228.
 pyrrhopterus, 133.
 spurius, 39, 112.
Ictinia mississippiensis, 61.
 sub-cærulea, 41.
 Ingersoll, Ernest, the Common Names of American Birds, 72.
Ionornis martinica, 42.
 JAY, Blue, 39, 149.
 Canada, 52.
 Long-crested, 193.
 Maximilian's, 43, 44.
 Steller's, 238, 239.
 Woodhouse's, 193.
 Jeffries, J. Amory, notes on an hermaphrodite bird, 17.
 Jencks, F. T., the Baldpate in Rhode Island, 61; capture of Richardson's Owl (*Nyctala tengmalmi richardsoni*) near Providence, R. I., 122; Great Gray Owl in Rhode Island, 183.
 Jilguero, 132.
 Job, Herbert K., Notes on some of the Winter Birds of Massachusetts, 147; Cory's Shearwater (*Puffinus borealis*) off the coast of Massachusetts, 244.
 Jones, Howard, Rails and Snipe in Ohio in Winter, 186.
 Jones and Shulze, notices of their "Nests and Eggs of the Birds of Ohio," 112, 166.
 Juan-chiviro, 91.
 Junco aikenii, 190.
 annectens, 190.
 caniceps, 190.
 hiemalis, 1, 7, 13, 52, 53, 78, 176, 177, 190.
 hiemalis oregonus, 189, 238.
 KING, F. H., Notice of his "Economic Relations of Wisconsin Birds," 107.
 Kingbird, 40, 126, 195.
 Gray, 39.
 Kingfisher, Belted, 25, 40, 150, 166, 196.
 Kinglet, Golden-crested, 145, 154.
 Ruby-crowned, 154.
 Kite, Mississippi, 41, 64.
 Swallow-tailed, 61, 118, 127.
 Kirtland, J. P., letter from, 126.
 Knowlton, F. H., the Winter Wren (*Anorthura troglodytes hiemalis*) in Western Vermont, 120; the Meadow Lark (*Sturnella magna*) in Vermont in winter, 182.
 LAGOPUS mutus, 232.
 mutus atkensis, 232.
Lagopus mutus reinhardti, 232.
 mutus rupestris, 232.
Lanius borealis, 160, 173.
 ludovicianus, 38.
 ludovicianus excubitorides, 118, 160, 166.
 Lapwing, 236.
 Lark, Horned, 148.
 Meadow, 126, 144, 182.
 Shore, 145.
 Western Horned, 193.
 Western Meadow, 193.
 Larus atricilla, 43.
 chalcopterus, 215, 216.
 delawarensis, 162, 163, 198.
 franklini, 116.
 glaucescens, 125, 214.
 glaucus, 186.
 kumlieni, 216.
 leucopterus, 125, 214, 216.
 philadelphia, 116.
 Lawrence, George N., notice of his descriptions of new species of birds, 114.
Leistes superciliaris, 136.
Leptasthenura ægithaloides, 206.
Leptoptila fulviventrìs, 114.
Leucosticte tephrocotis, 3, 240.
Lichenops perspicillatus, 141.
 Limpkin, 42.
 Linden, Charles, notice of his "Domestication of Wild Ducks," 233.
 Linnæan Society, notice of Transactions of, 50.
 Linnet, Pine, 146.
 Lintner, G. A., capture of the Golden Eagle at Albany, N. Y., 123; capture of the Yellow-breasted Chat at Albany, N. Y., 180.
Lobipes hyperboreus, 180, 186, 240.
Lomvia arra bruennichi, 10.
 ringvia, 238.
 troile, 9, 238.
 Longspur, Chestnut-collared, 161.
 Maccown's, 161.
Lophophanes bicolor, 37, 76, 237.
 inornatus griseus, 169.
Lophortyx californica, 32, 177, 184.
 gambeli, 32.
Loxia curvirostra, 3, 121.
 curvirostra americana, 46, 52, 144, 148, 149.
 curvirostra mexicana, 160.
 leucoptera, 46, 47, 52, 146, 148, 149, 174, 233.
Loxigilla portoricensis grandis, 114.
MACHETES pugnax, 237.
Machetornis rixosa, 142.

- Macrorhamphus griseus scolopaceus, 197.
 Magpie, 193.
 Yellow-billed, 126.
 Mareca americana, 61.
 Martin, Purple, 39, 63.
 McIlwraith, T., bird notes from Western Ontario, 143.
 Megapodius tumulus, 172.
 Melanerpes erythrocephalus, 40, 112, 116, 117, 118, 150, 177, 196, 234.
 formicivorus bairdi, 24.
 torquatus, 196.
 Meleagris gallopavo americana, 41.
 ocellata, 238.
 Melopelia leucoptera, 32.
 Melospiza cinerea, 231.
 fasciata, 7, 117, 144, 235.
 fasciata fallax, 189.
 lincolni, 189.
 palustris, 58, 235.
 Merganser, 126.
 Mergus serrator, 126.
 Merriam, C. Hart, notice of his "Vertebrates of the Adirondack Region," 50; on a bird new to northern North America, 213; breeding of the Harlequin Duck (*Histrionicus minutus*), 220; addendum to list of birds ascertained to occur within ten miles from Point de Monts, Province of Quebec, Canada; based chiefly upon the Notes of Napoleon A. Comeau, 244.
 Merrill, Harry, an occurrence of *Larus glaucescens* at Grand Manan, N. B., 125.
 Merrill, J. C., nesting habits of the Canada Goose, (*Bernicla canadensis*), 124.
 Merula flavirostris graysoni, 169.
 Methriopterus curvirostris occidentalis, 169.
 Micrathene whitneyi, 27, 178.
 Milvulus forficatus, 59, 177, 178.
 tyrannus, 203.
 Mimus calandria, 85.
 carolinensis, 57, 153.
 gilvus lawrencii, 169.
 patagonicus, 86.
 polyglottus, 37, 58, 74, 153, 171, 186, 233, 240.
 Minor Ornithological Publications, 116, 171, 233.
 Misto, 132.
 Mniotilta varia, 66, 67.
 Mockingbird, 37, 58, 153, 186, 240.
 Molothrus ater, 39, 121, 192.
 bonariensis, 131, 133.
 rufo-axillaris, 134.
 Motacilla flava, 115.
 ocularis, 168.
 Myiadestes dominicanus, 170.
 obscurus insularis, 170.
 obscurus occidentalis, 170.
 sanctæ-luciæ, 170.
 townsendi, 160, 238, 239.
 Myiarchus crinitus, 40.
 nuttingi, 228.
 ruficaudatus, 95.
 tyrannulus, 202.
 Myiobius naevius, 201.
 Myiodioides canadensis, 52, 53, 67, 71.
 mitratus, 38, 174, 177, 234.
 pusillus, 71, 165, 176, 236.
 pusillus pileolatus, 159.
 Myiodynastes solitarius, 201.
 Myiotheretes rufiventris, 140.
 NARANJERO, 91.
 Azul, 91.
 Nighthawk, 15, 40, 118.
 Texan, 21.
 Western, 196.
 Nutcracker, Blue, 193.
 Nuthatch, Brown-headed, 37.
 Red bellied, 52, 145, 149.
 Slender-billed, 154.
 White-bellied, 145, 149.
 Nutting, C. C., and Ridgway, Robert, notice of their paper on Costa Rican birds, 228.
 Nyctala tengmalmi richardsoni, 61, 122.
 acadica, 145.
 Nyctea scandiaca, 148, 177, 237, 240.
 Nyctherodius violaceus, 42.
 Nyctiardea grisea naevia, 36, 42, 174.
 OCEANITES oceanicus, 162, 163, 244.
 Ochthodromus wilsonius, 42.
 Olor bewicki, 62.
 buccinator, 62.
 columbianus, 62.
 cygnus, 62.
 Oporornis agilis, 113.
 formosa, 38, 176.
 Oriole, Bullock's, 193.
 Orchard, 39.
 Oroscoptes montanus, 153.
 Ortyx squamata, 33.
 virginiana, 41, 118, 119.
 Osprey, 41.
 Ouzel, Water, 154.
 Owl, Barn, 41, 122, 165, 234.
 Burrowing, 61, 197.
 California Pygmy, 27.

- Owl, Flammulated, 123.
 Ferrugineous Pygmy, 27.
 Great Gray, 123, 183.
 Great Horned, 41, 235.
 Little Screech, 41.
 Long-eared, 197, 235, 236.
 Mexican Screech, 26.
 Pygmy, 59, 242.
 Richardson's, 61, 122.
 Saw-whet, 145.
 Screech, 117.
 Short-eared, 148, 183.
 Snowy, 148, 237, 240.
 Spotted, 234.
 Western Horned, 26.
 Whitney's Pygmy, 27.
Oxyechus vociferus, 42.
 Oyster-catcher, 42.
PANDION haliaëtus carolinensis, 29,
 41, 177, 237.
Paroaria cucullata, 129.
Paroides flaviceps, 175.
 Parroquet, Carolina, 40, 127.
Parula americana, 38, 66, 67, 176,
 235.
 pitiayumi, 87.
Parus atricapillus, 59, 145.
 atricapillus septentrionalis,
 154.
 carolinensis, 37.
 hudsonicus, 10, 116.
 montanus, 154, 240.
 rufescens, 55, 116.
Passer domesticus, 112, 119, 127,
 145, 171, 178.
Passerculus caboti, 58.
 princeps, 8, 148.
 savanna alaudinus, 161.
Passerella iliaca, 7, 8, 150.
Passerina amœna, 191.
 ciris, 39.
 cyanea, 9, 174, 176.
Pecho-amarillo, 135.
Pecho-colorado, 136.
Pelecanus trachyrhynchus, 235.
 Pelican, White, 235.
Perisoreus canadensis, 4, 52.
 canadensis nigricapillus, 169.
 Petrel, Leach's, 162, 163.
 Wilson's, 162, 163, 244.
Petrochelidon lunifrons, 112, 160.
Peucea æstivalis, 39.
 carpalis, 234.
 illinoensis, 58.
 Pewee, Western Wood, 195.
 Wood, 40.
Phainopepla nitens, 237.
Phalacrocorax dilophus, 235.
 mexicanus, 116.
Phalarope, Northern, 180, 186, 240.
 Wilson's, 240.
Philohela minor, 150, 235.
Phlœocryptes melanops, 206.
Phrygilus caniceps, 130.
Phylloscartes ventralis, 198.
Phytotoma rutila, 203.
Pica rustica hudsonica, 193.
 rustica nuttalli, 126.
Picicorvus columbianus, 43, 234.
Picoïdes arcticus, 52, 122, 235.
 americanus, 52, 122.
Picus pubescens, 40, 145, 149.
 pubescens gairdneri, 196.
 querulus, 40.
 scalaris, 22.
 scalaris lucasanus, 22.
 stricklandi, 22.
 villosus, 40.
 villosus harrisi, 22, 196.
 Pigeon, Wild, 41.
Pinicola enucleator, 4, 6, 118, 126,
 143, 144, 147, 148, 149.
Pipilo chlorurus, 17, 192.
 erythrophthalmus, 39, 53,
 126.
 erythrophthalmus alleni, 39.
 maculatus, 192.
 maculatus arcticus, 192.
 maculatus megalonyx, 191.
 maculatus oregonus, 192.
Pitangus bellicosus, 200.
Placellodomus ruber, 219.
 sibilatrix, 209.
Plectrophanes lapponicus, 2.
 navalis, 2, 126, 148, 177.
Plotus anHINGA, 42.
 Plover, Golden, 162, 163.
 Killdeer, 36, 42, 148, 197.
 Mountain, 197.
 Piping, 9.
 Ring-necked, 9.
 Wilson's, 42.
Pluvianus ægyptius, 55.
Podiceps occidentalis, 55.
Podiceps auritus californicus, 198.
Polioptila cœrulea, 37, 113, 179.
 dumicola, 86.
Polyborus cheriway, 29.
Poœcetes gramineus, 166.
 gramineus confinis, 189.
Poospiza lateralis, 130.
 melanoleuca, 130.
 nigrorufa, 129.
Porzana carolina, 124.
 jamaicensis, 36, 116.
 jamaicensis coturniculus, 36.
 noveboracensis, 177.
Progne chalybea, 88.

- Progne elegans*, 89.
 subis, 39, 63.
 tapera, 88, 89.
Prontonotaria citrea, 38, 66, 68, 177.
Psaltiriparus minimus, 174.
Pseudogryphus californianus, 31, 55.
Pseudoleistes virescens, 135.
Puffinus anglorum, 115.
 borealis, 244.
 fuliginosus, 162, 163, 244.
 major, 162, 163, 244.
Purdie, H. A., a flock of White Herons (*Herodias egretta*) in Eastern Massachusetts, 242.
Pyranga æstiva, 39, 81.
 æstiva cooperi, 81.
 hepatica, 82.
 ludoviciana, 159.
 roseigularis, 114.
 rubra, 174, 176.
 saira, 81, 91.
Pyrocephalus rubineus, 201.
QUAIL, Blue, 33.
 California, 184.
 Chestnut-bellied Scaled, 34.
 Gambel's, 32.
 Scaled, 33.
Querquedula carolinensis, 162, 163.
 cyanoptera, 36, 198.
 discors, 36, 162, 163.
Quiscalus major, 39, 165.
 purpureus, 39, 235.
RAIL, Clapper, 42.
 Little Black, 36.
 Red-breasted, 42.
 Sora, 124.
 Virginia, 186.
Rallus beldingi, 169.
 elegans, 42, 113, 172.
 longirostris crepitans, 42, 113.
 virginianus, 116, 186.
Raven, 29, 52, 193.
Recurvirostra americana, 113.
Redbird, Summer, 39.
Red-breast, 136.
Redpoll, 144, 149.
 Holbøll's 95, 239.
Redstart, 159.
Regulus calendula, 154.
 satrapa, 145, 154, 176.
Reichenow, Anton, notice of his "Conspectus Psittacorum," 169; notice of his "Die Vögel der Zoologischen Gärten," 232; notice of his "Die Entenvögel der Zoologischen Gärten," 232.
Reichenow, Anton, and Shallow, Herman, notice of their Compendium of newly described Genera and Species of Birds, 169.
Rhoads, Samuel N., Early Capture of the Orange-crowned Warbler, 179.
Rhyacophilus solitarius, 174, 198.
Rhynchophanes maccowni, 161.
Rhynchops nigra, 42.
Richards, E. H., The Cardinal Grosbeak in Massachusetts, 59.
Ridgway, Robert, On Leconte's Bunting (*Coturniculus lecontei*) and other birds observed in South-eastern Illinois, 58; the Scissor-tail (*Milvulus forficatus*) at Norfolk, Virginia, 59; on some remarkable points of relationship between the American Kingfishers, 59; geographical variation in size among certain *Anatidæ* and *Gruidæ*, 62; notice of his revision of the Tree-Creepers (*Certhia*), 113; notice of his "Review of the genus *Centurus*," 114; notice of his New Species and Subspecies of Birds, 168; notice of his list of National Museum Desiderata of North American Birds, 170; notice of his "Catalogue of Old World Birds in the U. S. National Museum," 231.
Ridgway Ornithological Club of Chicago, 245.
Roadrunner, 116, 182.
Robin, 7, 11, 144, 149, 235, 237.
Robin, Western, 152.
Roe, Ettinge, breeding of the Short-billed Marsh Wren in the Hudson Highlands, 179.
Ruff, 237.
SAGE, JNO. H., capture of the Great Carolina Wren (*Thryothorus ludovicianus*) in Connecticut, in March, 120; capture of the Blue-gray Gnatcatcher (*Polioptila caerulea*) in Connecticut, 179; a partial albino Short-eared Owl (*Asio accipitrinus*), 183.
Saltator aurantirostris, 91.
Salpinctes obsoletus, 154.
Sandpiper, Baird's 233, 243.
 Bartramian, 198.
 Sempalmated, 198.
 Spotted, 198.
Sapsucker, Texan, 22.
Saunders, Howard, Notice of his "Notes on some *Laridæ* from Peru and Chili," 54.

- Sayornis dominicensis, 95.
 sayi, 195.
 Saxicola œnanthe, 115.
 Scaphidurus ater, 133.
 Scissor-tail, 59.
 Royal, 140.
 Scolecophagus cyanocephalus, 193.
 ferrugineus, 52, 150, 244.
 Scops asio, 41, 117, 171, 175.
 asio bendirii, 26.
 asio kennicotti, 174.
 asio maccalli, 26.
 asio trichopsis, 26.
 flammeolus, 123.
 Selasphorus alleni, 235.
 platycercus, 196.
 Serpophaga nigrans, 199.
 subcristata, 199.
 Setophaga ruticilla, 66, 68, 69, 70,
 72, 159.
 Sharpe and Seeböhm, notice of their
 "Catalogue of the Birds in the
 British Museum," 99.
 Shearwater, Cory's, 244.
 Greater, 162, 163, 244.
 Sooty, 162, 163, 244.
 Shrike, Great Northern, 160.
 Loggerhead, 38.
 White-rumped, 160.
 Shoveller, 36.
 Shufeldt, R. W., notices of his
 "Contributions to the Anatomy
 of Birds," 56, 166.
 Sialia arctica, 153.
 mexicana, 153.
 sialis, 9, 37, 63, 144, 149, 237.
 sialis guatemalæ, 169.
 Sisopygis icterophrys, 141.
 Sitta canadensis, 52, 145, 149.
 carolinensis, 145, 149, 177.
 carolinensis aculeata, 154.
 pusilla, 37.
 Siurus motacilla, 53, 177, 234, 235.
 nævius, 57, 179.
 Skimmer, Black, 42.
 Skua, Pomarine, 244.
 Smith, Everett, notice of his "Birds
 of Maine," 164.
 Snake-bird, 42.
 Snipe, Western Red-breasted, 197.
 Wilson's, 186, 243.
 Snowbird, 7, 13, 78.
 Gray-headed, 190.
 Oregon, 189, 238.
 Pink-sided, 190.
 Slate-colored, 53.
 White-winged, 190.
 Solitaire, Townsend's, 160, 238.
 Sparrow, Arizona Chipping, 190.
 Brewer's, 191.
 Clay-colored, 191.
 European House, 119, 127.
 Field, 53.
 Fox-colored, 7, 8, 9, 150.
 Gray Song, 189.
 Ipswich, 8, 148.
 Lincoln's, 189.
 Ridgway's, 191.
 Rufous-winged, 234.
 Savana, 236.
 Song, 7, 8, 144, 235.
 Swamp, 235.
 Tree, 144.
 Western Savanna, 161.
 White-crowned, 191, 238.
 White-throated, 7, 13, 52, 78,
 151.
 Spatula clypeata, 36, 198.
 Spelman, Henry M., the Cow Bunt-
 ing wintering in Massachusetts,
 121.
 Speotyto cunicularia hypogæa, 56,
 61, 166, 175, 197.
 Sperophila œrulescens, 92.
 palustris, 92.
 Sphyrapicus thyroides, 23, 196.
 varius, 173, 174, 176.
 varius nuchalis, 23, 196.
 Spiza americana, 172.
 Spizella breweri, 191.
 monticola, 46, 144.
 pallida, 191.
 pusilla, 53.
 socialis arizonæ, 190.
 Stearns, W. A., *Herodias egretta*
 at Amherst, 243.
 Stearns, W. A., and Coues, E.,
 notice of their "New England
 Bird Life," 161.
 Steganopus wilsoni, 240.
 Stelgidopteryx serripennis, 39, 160.
 Stejneger, Leonhard, notice of his
 Synopsis of the West Indian Spe-
 cies of *Myiadestes*, 170, notice of
 his Description of two new Races
 of *Myiadestes obscurus*, 170; notice
 of his paper on the *Cygninae*, 231.
 Stellula calliope, 59.
 Stephanophorus leucocephalus, 90.
 Stephens, F., a California Bird
 Wave, 188.
 Stercorarius pomatorhinus, 244.
 Sterna antillarum, 43.
 cantiaca acuflavida, 43.
 caspia, 62.
 forsteri, 198.
 portlandica, 48.
 regia, 43.

- Stilt, Black-necked, 42.
 Strix cinerea, 123, 183.
 dominicensis, 95.
 occidentalis, 234.
 Sturnella difilippii, 136.
 magna, 126, 144, 182.
 magna neglecta, 193.
 Sturnus vulgaris, 236.
 Sula bassana, 178.
 Surnia funerea, 5, 6.
 ulula hudsonia, 174.
 Swallow, Bank, 39.
 Barn, 160.
 Cliff, 160.
 Rough-winged, 39, 160.
 White-bellied, 160.
 Violet-green, 160.
 Swan, American, 233.
 Whistling, 9.
 Swift, Chimney, 40.
 White-throated, 196.
 Sycalis luteola, 132.
 Symphemia semipalmata, 42, 162, 163, 198.
 Synallaxis albescens, 207.
 hudsoni, 209.
 maluroides, 208.
 phryganophila, 207.
 sordida, 208.
 striaticeps, 208.
 sulphurifera, 208.
 Synnium cinereum, 123, 183.
 TACHYCINETA bicolor, 160, 177.
 thalassina, 160.
 Tacuara, 86.
 Tænioptera coronata, 138.
 dominicana, 139.
 irupero, 139.
 nengeta, 137.
 Talbot, D. H., the Gray-crowned Finch in confinement, 240.
 Tanager, Louisiana, 159.
 Tanagra cyanopectus, 91.
 striata, 91.
 Tantalus loculator, 36, 185.
 Tattler, Solitary, 198.
 Teal, Blue-winged, 36, 162, 163, 233.
 Cinnamon, 36, 198.
 Green-winged, 162, 163.
 Telmatodytes palustris, 38, 77, 166.
 palustris paludicola, 155.
 Tern, Black, 36, 166.
 Cabot's, 43.
 Caspian, 62.
 Forster's, 198.
 Least, 43.
 Royal, 43.
 Tetrao cristata, 33.
 Thompson, Frank J., the Water Thrush in confinement, 57.
 Thrasher, Bendire's, 153.
 Brown, 37, 153.
 Leconte's, 48.
 Sage, 153.
 Thrush, Audubon's, 152.
 Bicknell's, 12, 14, 15, 17.
 Gray-checked, 16.
 Hermit, 7, 8, 12, 52, 64, 149, 237.
 Large-billed Water, 53, 234, 235.
 Olive-backed, 12, 14.
 Red-bellied, 85.
 Small-billed Water, 179.
 Swainson's, 52, 153.
 Tawny, 15.
 Water, 57.
 Willow, 239.
 Wilson's, 12, 237.
 Wood, 53, 165, 237.
 Thryothorus bewicki, 112.
 ludovicianus, 38, 77, 81, 120.
 ludovicianus miamiensis, 81.
 Tijerita, 203.
 real, 140.
 Tinnunculus sparverius, 41.
 Titlark, 9, 155.
 Titmouse, Tufted, 37, 237.
 Tordo, 133.
 Towhee, 39.
 Green, 192.
 Spurred, 191.
 Townsend, Charles H., description of a hybrid Sparrow (*Zonotrichia albicollis* + *Junco hiemalis*), 78; some albinos in the museum of the Philadelphia Academy, 126.
 Tringa alpina americana, 245.
 subarquata, 115.
 Tringoides macularius, 112, 198.
 Trochilus colubris, 40, 175.
 Troglodytes ædon, 155.
 ædon parkmani, 120, 179.
 ochraceus, 168.
 platensis, 86.
 Tryngites rufescens, 245.
 Tuelon, James A., notice of his Birds of Pennsylvania, 171.
 Turdus aliciae, 12, 14, 16, 17, 73.
 aliciae bicknelli, 12, 16, 168.
 fuscescens, 57, 73, 237.
 fuscescens salicicola, 168, 239.
 leucomela, 85.
 migratorius, 7, 11, 73, 117, 144, 149, 175, 235, 237.

- Turdus migratorius propinquus*, 152.
mustelinus, 53, 57, 72, 165, 237.
pallasi auduboni, 152.
rufiventris, 85.
unalascae nanus, 7, 52, 64, 73, 149, 237.
ustulatus, 73.
ustulatus swainsoni, 14, 15, 17, 52, 153.
 Turkey, Wild, 41.
 Turner, Lucien M., notice of his paper on *Lagopus mutus* and its Varieties, 232.
Tyrannus aurantio-atro-cristatus, 202.
carolinensis, 40, 126, 195.
dominicensis, 39.
melancholichus, 202.
verticalis, 195.
vociferans, 195.
ULULA cinerea, 113.
Upucerthia dumetoria, 205.
Uria grylle, 150.
Urubitinga anthracina, 30.
Urraca, 136.
VANELLUS cristatus, 236.
Vireo flavifrons, 38.
flaviviridis, 213, 244.
gilvus, 160.
noveboracensis, 38, 165.
olivaceus, 11, 38, 171.
pusillus, 55.
solitarius plumbeus, 160.
Vireo, Plumbeous, 160.
 Red-eyed, 11, 38.
 Solitary, 15.
 Warbling, 160.
 White-eyed, 38, 165, 166.
 Yellow-green, 213.
 Yellow-throated, 38.
Viudita, 139.
 negra, 141.
Vulture, Black, 41.
WARBLER, Audubon's, 158, 186.
 Bachman's, 38.
 Black-and-yellow, 52, 53, 121.
 Blackburnian, 52.
 Black-capped Flycatching, 159.
 Black-poll, 126, 158.
 Black-throated Blue, 53, 165.
 Blue-winged Yellow, 38.
 Blue Yellow-backed, 38, 235.
 Canada Flycatching, 52, 53.
 Cærulean, 238.
 Chestnut-sided, 165.
 Golden-winged, 235.
 Hooded, 38, 234.
 Kentucky, 38.
 Macgillivray's, 159.
 Mourning, 52, 53.
 Nashville, 13, 237.
 Orange-crowned, 156, 179.
 Pine-creeping, 38, 120.
 Prothonotary, 38.
 Tennessee, 52.
 Virginia's, 155.
 Wilson's Black-capped, 165, 236.
 Yellow, 158.
 Yellow-rumped, 52, 121, 158.
 Yellow-throated, 38.
Waxwing, Bohemian, 235.
 Wheaton, J. M., notice of his "Report on the Birds of Ohio," 110.
 Whip-poor-will, Nuttall's, 21, 195.
 White, Geo. R., and Scott, W. L., notice of their ornithological report to the Ottawa Field Naturalists' Club, 55, 115.
Widgeon, American, 61.
 English, 116.
 Willet, 42, 162, 163, 198.
 Williams, R. S., the Calliope Hummingbird and Pygmy Owl in Montana, 59.
 Williston, S. W., the Mockingbird in Western Kansas, and the Northern Phalarope in Southern Wyoming, 240.
Woodcock, 150, 235.
Woodpecker, Banded Three-toed, 52.
 Black-backed Three-toed, 52, 235.
 Brown-headed, 196.
 Californian, 24.
 Downy, 40, 145, 149.
 Gairdner's 196.
 Gila, 24.
 Golden-winged, 149, 235.
 Hairy, 40.
 Harris's 22, 196.
 Ivory-billed, 40, 60.
 Lewis's, 196.
 Nuchal, 196.
 Pileated, 40.
 Red-bellied, 40.
 Red-cockaded, 40.
 Red-headed, 40, 116, 117, 118, 150, 196, 234.
 Red-naped, 23.
 Strickland's, 22.
 Red-shafted, 196.
 Williamson's, 23.
 Yellow-shafted, 40.
Wren, Cañon, 155.

Wren, Carolina, 38, 120.
 House, 155.
 Long-billed Marsh, 38, 155,
 166.
 Parkman's, 179.
 Rock, 154.
 Short-billed Marsh, 38, 179.
 Winter, 8, 52, 53, 119, 120,
 164.
 XANTHOCEPHALUS icterocephalus,
 193.
 Xanthosomus flavus, 134.
 Xema furcatum, 54, 233.
 sabinii, 54.

YELLOW-BREAST, 135.
 Yellow-throat, Maryland, 158.
 ZAMELODIA ludoviciana, 236.
 melanocephala, 176, 191.
 Zenaidura carolinensis, 32, 41, 197,
 245.
 Zonotrichia albicollis, 7, 13, 46, 52,
 78, 151.
 gambeli intermedia, 189, 191.
 leucophrys, 189, 191, 238.
 pileata, 131.
 Zorzal, 85.
 vientre colorado, 85.

ERRATA.

Page 6, line 19, for *eneucleator* read *enucleator*.
 " 39, " 18, for **erythrophthalmus** read **erythrophthalmus**.
 " 62, " 40, for *glauciun* read *glaucium*.
 " 80, " 23, for *miamensis* read *miamiensis*.
 " 103, " 31, for "*pallassi*" read "*pallasi*."
 " 122, " 2, for 1882 read 1883.
 " 151, " 8, for **LISTS** read **LIST**.
 " 153, " 21, for **bendirei** read **bendirii**.
 " 169, " 15, for *Reich* read *Reich*.

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